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ABSTRACT

The three papers presented in this compilation address a basic issue of school desegregation research: what future directions should such research take in order to provide useful knowledge for parents, educators, and policymakers? Each paper shares the viewpoint that it is narrow and insufficient to study desegregation effects in terms of improvement of minority achievement alone. The first paper, "What Does Educational Research Tell Us About School Desegregation?" (Gail E. Thomas; Frank Brown) provides a critique of past desegregation research and offers a set of alternative research questions and issues to guide future inquiries. The second paper, "The Impact of Desegregation on Going to College and Getting a Good Job" (James M. McPartland; Jomills H. Braddock II) focuses on the need for desegregation research to examine how school desegregation may help overcome structural barriers that exclude minorities from equal opportunities for success as adults. The third paper, "Assessing School Desegregation Effects: New Directions in Research" (Jomills H. Braddock II; James M. McPartland) broadens the theme of the previous paper to include the need to expand research methods in order to permit comparisons of institutions and organizations. Each paper provides an abstract and includes a list of references. (Author/BJV)

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Report No. 312
July 1981
THREE REPORTS ON NEW DIRECTIONS IN SCHOOL DESEGREGATION RESEARCH

The Johns Hopkins University

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through five programs to achieve its objectives. The Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the interrelations of school desegregation with other equity issues such as housing and job desegregation. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning Instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes. The Studies in Delinquency and School Environments program is examining the interaction of school environments, school experiences, and individual characteristics in relation to in-school and later-life delinquency.

The Center also supports a Fellowships in Education Research program that provides opportunities for talented young researchers to conduct and publish significant research, and to encourage the participation of women and minorities in research on education.

This report, prepared by the Studies in School Desegregation program, examines previous research on school desegregation effects and suggests new research directions to provide useful information for policy deliberations about desegregation.

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Report III
Assessing School Desegregation Effects: New Directions in Research
Jomills H. Braddock II and James M. McPartland

Abstract

This compilation presents three papers that address a basic issue of school desegregation research: what future directions should such research explore in order to provide useful knowledge for parents, educators, and policy makers? Each paper shares the viewpoint that it is narrow and insufficient to study desegregation effects in terms of improvement of minority achievement alone.

Thomas and Brown provide a critique of past desegregation research and offer a set of alternative research questions and issues to guide future inquiries. McPartland and Braddock focus on the need for desegregation research to examine how school desegregation may help overcome structural barriers that exclude minorities from equal opportunities for success as adults. Then Braddock and McPartland broaden this theme to include the need to expand research methods in order to permit comparisons of institutions and organizations.

What Does Educational Research Tell Us About School Desegregation Effects?*

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*This paper was presented at the 1981 annual meeting of the American Education Research Association held in Los Angeles, California. Thanks to Gene Eubanks and John Hollifield for their helpful comments.

Abstract

This paper asks the question: What does educational research tell us about the effects of school desegregation? The evidence suggests that we know little about school desegregation effects, and to adequately assess these effects will require at least another decade of well designed longitudinal research which responds to questions and issues that are not being currently addressed. Our conclusions are based primarily on a review and evaluation of the methodologies and findings from past and present school desegregation research. We also present a set of alternative research questions and issues that should guide future school desegregation inquiries.

Introduction

James Coleman's (Coleman et al., 1966) Equality of Educational Opportunity (EEO) study (referred to elsewhere as the Coleman Report) has been the single most influential document on school desegregation policy and research. The finding that had the greatest impact was that black student academic achievement increased as the proportion of white students in their schools increased. Various methodological criticisms of the Coleman Report generated a series of reanalyses of the EEO data (U.S. Commission on Civil Rights, 1967; Armor, 1972; McPartland, 1968; Pettigrew and Riley, 1972). However, the positive relationship between black achievement and percent white student enrollment was also confirmed in these reanalyses. Armor (1972) and others who reassessed the EEO data amended the initial finding by Coleman and his colleagues by noting that the positive effect of percent white on black achievement was due to desegregation at the classroom level as opposed to the school level.

Many of the school desegregation studies following the Coleman Report and reanalyses of the EEO data employed longitudinal quasi-experimental designs. Researchers using this approach pointed out that the EEO data were cross-sectional and thus not appropriate for assessing black achievement before and after desegregation. St. John (1975), Bradley and Bradley (1977) and others (Weinberg, 1977; Crain and Mahard, 1981) have reviewed school desegregation studies that have used a longitudinal-experimental design. These studies represent some improvement over the EEO investigations; however, they also share important methodological limitations.

One criticism of these studies is poor application of the experimental design techniques. St. John (1975) reported that at least three assumptions

must be met in order for longitudinal experimental design studies of school desegregation to be valid tests of desegregation effects. First, desegregated and segregated subjects must be initially equivalent regarding demographic and background characteristics (i.e., socioeconomic status, age, aptitude). Subjects should therefore be randomly assigned and matched on these variables. Second, desegregated and segregated schools must retain a majority of the original subjects throughout the course of the study. Third, curricula and programs in the segregated and desegregated schools should be equivalent in all respects except for racial composition. St. John (1975) also noted that quasi-experimental school desegregation studies should include subjects who are transferred from segregated to desegregated schools and a control group of students who attended a segregated school prior to and after desegregation.

Bradley and Bradley (1977) used St. John's criteria to evaluate a number of recent desegregation studies. Table 1 lists and summarizes these studies. The authors concluded that although many of the studies

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Table 1 About Here

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indicated positive desegregation effects, their methodological deficiencies restricted the validity of most of the findings. For example, most of these investigations lacked adequate control groups. In addition, they varied extensively on how the schools achieved desegregation (i.e., busing, school closing, open enrollment).

A more recent review of 93 studies by Crain and Mahard (1981) highlighted additional factors that render many school desegregation findings tenuous. Different measures of achievement were used to assess the effects

of desegregation on black students. Some studies used percentile rankings while others used raw scores and grade level equivalence. Studies also differed on the time in which desegregation was implemented and evaluated, and the grade level in which students were desegregated. In 50 percent of the investigations, desegregation effects were evaluated at the end of the first year of implementation. Only 3 percent of the studies reviewed by Crain and Mahard (1981) evaluated desegregation effects on black achievement after five years of implementation.

Table 2 shows the seven types of methodologies that were used in the studies reviewed by Crain and Mahard (1981) and the frequency of positive

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Table 2 About Here

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desegregation effects associated with each method. Eighty-six percent of the studies that used the longitudinal random design, which is the most reliable technique, indicated positive desegregation effects. Conversely, among the studies that employed the most unreliable design (i.e., the national norms technique, which asks whether black test scores are approaching white test scores over time), only 33 percent indicated positive desegregation effects. Thus, variations in the quality and reliability of research designs is another factor that has restricted the conclusiveness of school desegregation studies employing the quasi-experimental method.

Recent Survey and Ethnographic Studies of School Desegregation

More recent studies of school desegregation, based on ethnographic field techniques and secondary longitudinal data, have not been systematically reviewed. They depart from and improve upon past studies by better detailing

the internal conditions that characterize desegregated schools, examining the relationship between school desegregation and other outcome variables (i.e., student aspirations, self-concept, racial attitudes), and extending school desegregation research to include college and higher education effects. In addition, a few studies have examined the long-term effects of school desegregation and its relationship to other institutions (i.e., housing, employment) and social processes (i.e., white flight).

Classroom and School Climate Studies

Recent desegregation research on school and classroom climate has focused on the relationship between the social dynamics of the classroom and school environment and student achievement and race relations. For example, Slavin and Madden's study (1979) showed that classroom activities that involve cooperative interaction between students of different races improve race relations. Brookover (1978), Schofield and Sagar (1979) and Rist (1979) also investigated the internal conditions of classroom and school environments. Rist (1979) summarizing a number of ethnographic studies, reported that the patterns of racial adaptation and conflict among students, teachers and staff differed considerably among desegregated schools depending upon the sex, age and socioeconomic status of students. He concluded that successful school desegregation depended on the social and demographic mix of students, and on how school administrators defined success (for example, some administrators considered desegregation successful if the level of violence and interracial conflict in schools was kept at a minimum).

School Desegregation Effects and Other Independent Variables

Earlier school desegregation studies focused almost exclusively on

academic achievement as the major dependent variable. However, more recent studies have considered other outcome variables. For example, Epps (1978) and Hare (1979) investigated the effects of school desegregation on black students' aspirations, self-concept and self-esteem. Epps reported that black students in desegregated schools do not experience low self-esteem or low aspirations. Hare (1979) investigated sex differences in achievement orientations and self-esteem among blacks in desegregated schools. He found that black females scored higher on both measures than black males. Epps (1978) and Hare (1979) noted the importance of social class and the context of the school learning environment in understanding race and sex differences in self-esteem, self-concept and aspirations.

Farley (1975) and others (Giles, Gatlin and Cataldo, 1974; Coleman, Kelly and Moore, 1975; Rossell, 1975) have examined the relationship between school desegregation and white flight. Farley, Richards and Wurdock's (1980) review of the "white flight" literature indicated that the findings are equivocal. One reason is that some of the studies on white flight are based on case studies of cities that had desegregated for different lengths of time while other studies examined cities in the initial stages of desegregation. Most of these studies showed a decline in white student enrollment in the public schools within the past decade. However, Farley et al. (1980) noted that better statistical models and greater consistencies among models and methodologies are needed to determine the actual impact of school desegregation on white flight.

Higher Education Desegregation

Desegregation in higher education became a central issue in 1970 after the Adams decision (Haynes, 1978) which mandated that states desegregate

their colleges and universities. Consequently, the number of studies that address the effects of higher education desegregation are limited. Thomas, McPartland and Gottfredson (1980) examined the relationship between higher education desegregation and black student enrollment throughout higher education. They found that racial isolation between blacks and whites was greatest at the two- and four-year levels, where blacks had the greatest enrollment access, and lowest at the graduate and professional levels, where blacks were least represented. Their findings also demonstrated that desegregation could negatively affect black student enrollment in the South if racial isolation were reduced by eliminating the traditionally black colleges and universities.

Other studies at the postsecondary level have assessed the relationship between desegregation and black student persistence (Thomas, 1981) and the experiences of black students at predominantly white colleges (Willie and McCord, 1972; Boyd, 1981; Allen, 1981). Willie and McCord (1972) and Allen (1981) found that many black students on white campuses experience alienation, dissatisfaction, and academic difficulty. Thomas's (1981) investigation showed that net of family background and academic ability, black students in predominantly black colleges graduated on schedule more often than blacks in predominantly white colleges. Also, Johnson, Smith and Tarnoff (1975) found that black graduate and professional students in predominantly white institutions experienced problems of prompt promotion and retention.

Long-Term Effects of School Desegregation

Few studies have evaluated the effects of school desegregation on occupational attainment and other adult outcomes. Crain (1970) investigated

the effects of secondary school desegregation on the job attainment of black males. He reported that black men who had attended desegregated secondary schools obtained better jobs than blacks who had attended predominantly black schools. Black men from desegregated schools held a higher percentage of nontraditional jobs in sales, crafts, and the professions, and had higher incomes than black male graduates from predominantly black high schools.

A study of the long-term effects of desegregation by the U.S. Commission on Civil Rights (1967) reported that blacks who had attended desegregated schools were more likely to live in desegregated neighborhoods and enroll their children in desegregated schools, and had more access to job information than blacks who had attended predominantly black high schools. Crain and McPartland (1980) reported from a more recent longitudinal survey that black students in predominantly white colleges perceived greater job opportunity and chances for success than black students at predominantly black colleges. More recent and extensive longitudinal data are needed to assess the long-term effects of school desegregation.

General Assessment of School Desegregation Research

Although the more recent desegregation studies have extended earlier work, they share important limitations with past studies. For example, school desegregation studies generally lack clarity and/or consistency regarding the goals and objectives of school desegregation. An implied assumption underlying this research is that the goals and objectives of school desegregation are multifaceted. Thus school desegregation is designed to: (1) achieve a certain student and faculty racial mix; (2) improve minority achievement; (3) improve race relations; (4) promote the

access and retention of minorities at the college and advanced higher education levels; and (5) increase the quality and diversity of job opportunities for minorities. All of these are important goals. However, if schools are to be more effective and more consistently evaluated, these goals must be ranked by policymakers.

School desegregation studies also lack an appropriate theoretical framework. Initially, Coleman (1966) and his colleagues employed McClelland's (1951) theory of "need achievement" and the "lateral transmission of values" hypothesis to explain the positive relationship between black achievement and percent white enrollment. They argued that black students lacked the necessary achievement values and motivation, but that contact with white students (who were appropriate role models) would enhance black student achievement and motivation. This explanation has not been challenged in subsequent desegregation studies (Bradley and Bradley, 1977). However, William Labov (1970), Ogbu (1978), and Valentine (1971) have argued that traditional achievement theory and "deficit" perspectives are highly ethnocentric and inappropriate for understanding minority achievement. These critics suggest that Bicultural, Difference, and Conflict theories provide more appropriate frameworks because these theories acknowledge cultural differences and cleavages between majority and minority group cultures.

Pettigrew (1967) and McConahay (1978) maintain that Gordon Allport's (1954) Equal Status Contact theory is a useful theoretical perspective for implementing and assessing school desegregation. Allport's theory specifies seven conditions that must occur to facilitate equal status and positive race relations between members of majority and minority groups:

1. Equal status must exist within the contact situation.
2. Positive perceptions of the other group (regardless of status) must result from activities during contact.
3. Majority group members must experience contact with minority group members who are of higher socioeconomic status.
4. Contact must occur under conditions that require cooperation between racial groups.
5. Meaningful rather than superficial contact must occur.
6. The authorities in desegregated settings (i.e. school officials, employers, etc.) should favor and promote the intergroup contact situation.
7. Contact should occur in a positive environment that offers rewards.

Pettigrew (1967) reported that many of the school climates in which desegregation has taken place do not meet Allport's (1954) criteria. McConahay (1978) noted that much money, effort and good will are required to successfully implement these conditions in desegregated schools. However, if effectively implemented, these conditions may result in more positive race relations and minority achievement.

A third weakness of desegregation research is the void between the findings and their usefulness to school practitioners and educational policy makers. Smith and Dziuban (1977) described the situation as follows:

> "The numerical indicators and correlates of desegregation derived from national level studies have had minimal effect on assisting schools through the stages from segregation to desegregation to integration...By now, it should be obvious that desegregation will not be accomplished in a computer. At present researchers only talk to researchers,

> and those who are involved with remedies can not listen. The result is a debilitating gap between research and remedy (1977; p. 51).

Thus, in addition to inconsistencies among research findings, there is the problem of communicating the findings to the broader educational community. This is particularly true of school desegregation studies that have used multivariate analyses and employed dummy variable measures of school and student racial composition as independent variables. Very little can be inferred from these studies as to why these racial composition measures produce various effects. Smith and Dziuban (1977) noted that many of the variables that may help explain the relationship between segregation/desegregation and student outcomes do not lend themselves to multivariate analyses.

A final, important shortcoming of school desegegation research is its limited inclusion of other racial minorities (i.e., Hispanics, Asian-Americans, Native Americans). School desegregation and equality of educational opportunity have been basically defined by policy makers and researchers as "black-white" issues with studies primarily based on black and/or white samples. Also, few studies have been conducted by minority researchers.

In summary, desegregation research should be expanded to include studies of other racial minorities. In addition, more minority and majority researchers with alternative theoretical perspectives should be engaged in school desegregation research.

Alternative Questions for Future Research

In addition to responding to the research limitations previously discussed, future school desegregation researchers must investigate the

following important questions that have not been raised or adequately addressed in past studies.

1. What is the effect of school desegregation on whites?

   We know little about the attitudes and perceptions of whites toward desegregation and the effects of school desegregation on white student achievement. The few past investigations on whites show that white parents are opposed to busing and that white students do not experience achievement decline as a result of desegregation (Weinberg, 1975; Armor, 1972). Also, Webster (1961) and Sheehan (1980) found that desegregation reduces the stereotypes and negative attitudes that whites hold towards blacks. More systematic data on the effects of desegregation on white students, teachers, parents and administrators at all levels of education are needed.

2. What are the current and future effects of student enrollment decline and state and federal funding policies on school desegregation?

   Central city school districts with high concentrations of minority students are experiencing disporportionate declines in student enrollment. The U.S. Commission on Civil Rights (Education Daily, 1977) reported that 41 percent of all black elementary and secondary school children attend predominantly inner city schools that are 90 to 100 percent black. These schools have undergone substantial student loss. Because most states allocate funds on the basis of the number of students in a school district, many of these schools have experienced a decrease in state aid.

Smith and Dziuban (1977) reported that most current state aid formulae and supplemental federal funding (i.e., Title I) do not offset the differential needs of poorer districts. They also noted that fiscal discrimination often accelerates school and residential desegregation along class and racial lines. Schools that receive certain types of state and Federal funds are frequently labeled as "schools for the disadvantaged." These schools are readily perceived as inadequate by middle class parents who subsequently relocate and/or enroll their children in private schools or more attractive public schools. The increase in private school attendance by middle class students, the declining enrollments in inner city schools, and the decrease in Federal and state support for public educational programs are factors that seriously threaten the future of public school desegregation. Thus, their effects should be extensively assessed in future studies.

3. What is the nature of school counseling and tracking practices and student academic success in segregated and desegregated schools?

Research evaluating the effectiveness of segregated versus desegregated schooling should more systematically examine the structure and internal conditions of desegregated and segregated learning environments. Comparative studies at the elementary and secondary levels are needed to assess the nature of student counseling and school tracking practices. Existing data show that net of ability, minority students in desegregated elementary and secondary schools are more frequently assigned to special education and vocational programs than majority students (Smith

and Dziuban, 1977; Rosenbaum, 1976). In addition, Crain and Mahard (1978) reported that the lower the proportion of black teachers in secondary schools, the lower the grades of black students and the lower their college attendance rates.

Knowledge of how minority students fare regarding prompt promotion and retention at all levels of schooling is also critical for assessing the effectiveness of school desegregation. Felice and Richardson (1977) examined the attrition rates of blacks and Mexican-American students three years before and after the desegregation of a Waco, Texas school district. They found that the attrition rates were higher for both groups after desegregation. In addition, the authors reported that dropout rates were higher for minority students who were bused to lower socioeconomic status schools where teacher expectations were lower than for minority students who attended high socioeconomic status (SES) schools where teacher expectations were higher. Felice and Richardson (1977) concluded that the SES climate of the school and teacher expectations are important determinants of the retention and academic success of minorities in desegregated schools.

A few studies have been conducted on the retention and academic achievement of blacks at the postsecondary and graduate school levels. Thomas (1981) found that net of family status and ability, black students attending predominantly black colleges receive higher grades and are more successful in graduating on schedule than black students in predominantly white colleges. A

more recent study of black undergraduates by Fleming (1981) also showed positive effects for black colleges. She reported that matriculation in black colleges enhanced the ability of black students to compete socially and academically, but matriculation in white colleges produced a decline in the competitive performance of black students. She concluded that black colleges, rather than duplicating the services of white colleges, offer their students an alternative educational and social environment that supports and promotes their academic achievement. Johnson, Smith and Tarnoff (1975) studied the retention and promotion patterns of black graduate and professional students in predominantly white institutions. They observed that a disproportionate percentage of these students experience course repetition and attrition.

4. How does school desegregation affect minority faculty and staff?

Desegregation research has focused almost exclusively on students as the prime unit of analysis. However, alternative units (i.e., institutions, special interest groups, school boards) and other participants in the desegregation process need to be studied. We know little, for example, about the effects of school desegregation on minority faculty. One study at the elementary and secondary level revealed that black principals were often reassigned to less competitive positions following desegregation and that a disporportionate number of less experienced black teachers were assigned to poor and predominantly black urban schools (Smith and Dziuban, 1977).

A more recent study of minority faculty in predominantly white colleges has been conducted by the National Urban League (Stafford, 1980). Sixty-one percent of the minority faculty (Hispanics, Blacks, Asian-Americans) in the study indicated that they were dissatisfied with their opportunities for advancement. Forty-six percent felt that they were in less secure positions than their white colleagues, and 40 percent reported that they were likely to leave their current institution within the next five years.

5. How does desegregation affect traditionally black colleges?

Many of the traditionally black colleges and other minority institutions are experiencing a substantial loss in student enrollment due to declining Federal and state aid and increasing black student enrollment in white colleges. However, despite these adverse trends, black colleges continue to award approximately 50 percent of the BA degrees earned by black undergraduates (Morris, 1979). The status and role of black colleges and other minority institutions need to be assessed in future school desegregation research.

Summary and Conclussion

This paper undertook a comprehensive review of past and present school desegregation literature to assess how well we are currently informed about school desegregation effects. Many of the studies reviewed showed positive desegregation effects while an equal number showed negative or negligible effects. In addition, studies varied in the type and strength of their methodology, in the time period of desegregation implementation, and in the type of desegregation plans evaluated. Given these and other

disparities, we concluded that no definitive statement can be made presently about the effects of school desegregation.

We suggest that several improvements and extensions in present desegregation research methodology and theory are needed to extend our knowledge and understanding of school desegregation effects, and raise a number of alternative questions, issues, and units of analyses that must be considered in future work. We conclude that at least another decade of systematic inquiry by majority and minority researchers who have access to richer data and who employ better theoretical perspectives will be needed to advance our current understanding of school desegregation effects.

Table 1

A Capsule Review of Field Desegregation Studies, 1959 - 1975

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Anderson, Note 3	Open Enrollment	*Ex post facto*, quasi-experimental	*T* tests, correlations	Desegregated black subjects achieve at significantly higher level than segregated subjects.	Did not take into account parents' socioeconomic status and attitudes.
Armor, 1972a	Busing	Nonequivalent control group	*T* tests	No significant differences in achievement gains between black and white subjects.	Bused subjects were volunteers; bused and control subjects were not matched; high rate of subject attrition; sending and receiving schools were not equivalent; no adequate predesegregation measures of achievement.
Banks & DiPasquale, Note 13	Busing	Nonequivalent control group		Bused subjects made higher mean achievement gain than black control subjects; achievement level gap between white control subjects and bused subjects about the same.	Subject selection not specified; large predesegregation achievement difference between bused and black control 7th-grade subjects.
Beers & Reardon, 1974	Central Schools	Unspecified, quasi-experiment	None	Black subjects' gain scores, relative to those of whites, were enhanced.	No adequate predesegregation measures of achievement; no true control group; school system personnel and policy changed during course of study.
Carrigan, Note 4	School Closing	Nonequivalent control group	*T* tests	Black control subjects generally performed at higher levels than black transferred subjects.	School from which control subjects were drawn was actually desegregated.
Dambacher, Note 15	Busing	Cross-sectional and longitudinal	None	Black, third grade subjects made greater achievement gains after desegregation than prior to desegregation.	No control group; inadequate design.
Denmark, 1970	School Closing	Unspecified, quasi-experiment	None	Black subjects in grades 1-2 performed at a level closer to the white mean than black subjects in grades 3-5.	Inappropriate control group; high rate of subject attrition.
Evans, 1972	Central Schools	Nonequivalent control group	Unspecified	Black, fifth-grade experimental subjects' achievement in reading and math significantly better than that of control subjects.	Possible subject and school inequivalence; no adequate predesegregation measures of achievement.
Evans, 1973	Central Schools	Nonequivalent control group	Analysis of covariance	Black, experimental subjects in grades 3-5 achieved at significantly higher levels in reading and math than did control subjects.	Possible subject and school, inequivalence; no adequate predesegregation measures of achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Felice, 1974	Busing	Nonequivalent control group	*T* tests	Bused subjects' achievement on reading subtest and the total battery was significantly lower than that of control subjects.	Questionable school and subject equivalence.
Frary & Goolsby, 1970	Experimental project	Nonequivalent control group	Multivariate analysis of covariance	Desegregation was significantly and positively related to achievement and reading test scores of black, first-grade students.	Experimental and control subjects were not matched on important variables; highly unequal number of subjects in each treatment cell.
Goldberg, Note 11	Busing	Nonequivalent control group	*T* tests and analysis of covariance	19 of 77 comparisons showed significantly higher achievement on the part of subjects exposed to some form of school desegregation.	Failed to meet assumption of subject equivalence; high rate of subject attrition; used different pretests and posttests of achievement; no adequate predesegregation measures of achievement; different compensatory education services were available to subject groups.
Graves & Bedell, Note 5	School Closing	Separate sample, pretest-posttest	Not specified	Significantly smaller proportion of black transferred subjects failed to progress 1½ yrs. in one or more achievement areas than black control subjects.	Design is vulnerable to history effects; inadequate predesegregation measures of achievement.
Hansen, 1960	Open Enrollment	One-group, preexperimental	None	Black students' achievement improved and white students' achievement was not depressed following desegergation.	No separate reports of black and white students' test scores following desegregation; different pre- and postdesegregation measures.
Hsia, Note 14	Busing	Nonequivalent control group	*T* tests	Desegregation failed to close the achievement gap between white and black students.	Inadequate control group; black subject samples not matched on key variables.
Laird & Weeks, Note 9	Busing	Nonequivalent control group	*T* tests	Significant gains in reading achievement of younger bused subjects.	Bused subjects were volunteers, control subjects were not.
Mahan, Note 12	Busing	Nonequivalent control group	Unspecified	27 of 35 significant comparisons favored the bused subjects.	Bused subjects were volunteers, control subjects were not; sending and receiving schools not equivalent; large loss of subject data; no adequate predesegregation measure of achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Mayer et al., 1974	Central Schools	Nonequivalent control group	*T* tests	Black and white subjects' achievement levels increased significantly; black subjects' increase shown to be directly related to desegregation; black-white achievement gap did not widen.	Did not match black subjects samples on key variables.
Maynor, 1970	Central Schools	Unspecified, quasi-experimental	*T* tests	Subjects' postdesegregation math and total battery achievement scores were significantly higher than were predesegregation scores.	Did not match black subject samples on key variables.
Morrison & Stivers, Note 8	School Closing	Nonequivalent control group	Analysis of Covariance	Transferred fourth-grade students performed significantly better than control students in reading and math; transferred sixth-grade students performed significantly better than control students in math.	Questionable student equivalence; no adequate presdesegregation measures of achievement; results confounded by compensatory education services available to students.
Prichard, 1969a; 1969b	Central Schools	Separate-sample, pretest-posttest	Analysis of Covariance	Math achievement of fifth- and seventh-grade, transferred students was significantly higher than that of their respective control groups.	Design is vulnerable to history effects such as the change in math curriculum in the school district.
Purl & Dawson, Note 6	School Closing	Time-series	*T* tests	No significant changes in black subjects' achievement test scores over a five-year period.	Design is vulnerable to history effects; use of *t* tests was probably inappropraite.
Purl & Dawson, Note 7	School Closing	Cross-sectional and longitudinal	None	Achievement scores of third-grade students rose steadily from 1965 (predesegregation) to 1972 (postdesegregation).	No control group; inadequate design.
Rock et al., Note 10	Busing	Nonequivalent control group	Analysis of Covariance	Significant comparisons favoring the bused subjects on 13 of 27 subtests.	Subjects were a select group; sending and receiving schools were not equivalent; high rate of subject attrition.
St. John & Lewis, 1971	Open Enrollment	*Ex post facto*, quasi-experimental	Multiple regression	Racial context (percentage white) was significantly and positively related to black students' math achievement.	Not all determinants of self-selection of exposure to desegregation can be statistically controlled; additional SES controls markedly reduced the relationship between racial context and student achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Samuels, 1972	Busing	Posttest-only control group	Analysis of variance	Bused students performed significantly better than control students on a reading subtest and a composite reading measure.	Failure to meet the assumptions of subject and school equivalence.
Singer et al., 1975	School Closing	Separate sample, pretest-posttest	Trend analysis	Desegregation was not related to black students' achievement.	Design is vulnerable to history effects; high rate of subject attrition.
Stallings, 1959	Open Enrollment	Static-group, preexperimental	Not specified	Black and white students' achievement improved following desegregation; greatest improvement for black students.	Equivalence of student samples not determined.
Zdep, 1971	Busing	Nonequivalent control group	Analysis of variance	Achievement of bused first-grade students significantly higher than that of control students.	Failed to meet the assumption of school equivalence; questionable external validity.

Source: Laurence and Gifford Bradley: "The Academic Achievement of Black Students in Desegregated Schools: A Critical Review." Review of Educational Research (Summer)47:410-416. 1977.

Note: Permission to reproduce this table was granted by the American Education Research Association.

Table 2

Percentage of Positive and Negative Results,
by Type of Data Used

Data Type	Positive	Zero	Negative	Total	(N)
Longitudinal with randomly allocated treatment/control group	86%	5%	10%	101%	(21)
Longitudinal, with justification for considering a black control group as similar to the treatment group	48%	39%	13%	100%	(23)
Longitudinal, with segregated black control group	58%	14%	28%	100%	(108)
Cross-sectional, with segregated black control group	55%	17%	28%	100%	(29)
Previous black cohort as control	53%	16%	31%	100%	(64)
Longitudinal, with a white control group	33%	8%	58%	99%	(12)
Longitudinal, compared to national norms	34%	11%	55%	100%	(44)

Source: Robert L. Crain and Rita Mahard: "Desegregation and Black Achievement: A Second Review of the Research." Center for Social Organization of Schools. Johns Hopkins University.

NOTE: Total percentages may not sum to 100 due to rounding.

References

Allen, W. R. Correlates of black student adjustment, achievement and aspirations at a predominantly white university. In Gail E. Thomas (ed.), Black students in higher education, conditions and experiences in the 1970s, pp. 126-41. Westport, Connecticut: Greenwood Press, 1981.

Allport, G. W. The nature of prejudice. Cambridge, Massachusetts: Addison-Wesley, 1954.

Armor, D. The evidence on busing. Public Interest, 1972, 28, 90-126.

Boyd, W. M. The forgotten side of the black undergraduate: An assessment of academic achievement and aspirations during the 1970s. In Gail E. Thomas (ed.), Black students in higher education, conditions and experiences in the 1970s, pp. 142-51. Westport, Connecticut: Greenwood Press, 1981.

Bradley, L. A. & Bradley, G. W. The academic achievement of black students in desegregated schools: A critical review. Review of Educational Research, 1977, 47, 399-449.

Brookover, W., et al. Elementary school social climate and school achievement. American Educational Research Journal, 1978, 15, 310-318.

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. Equality of educational opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

Coleman, J. S., Kelly, S. D., & Moore, J. A. Trends in school segregation, 1968-73. Washington, D.C.: The Urban Institute, 1975.

Crain, R. L. School integration and occupational achievement of Negroes. American Journal of Sociology, 1970, 75, 593-601.

Crain, R. L., & McPartland, J. M. Minority employment opportunities: Preliminary analysis of effects of school and college desegregation. Paper presented at the American Education Research Association, Boston, Mass.

Education Daily. U.S. civil rights report on school desegregation. Washington, D.C., 1977.

Epps, Edgar C. The impact on school desegregation on the self-evaluation and achievement orientation of minority children." Law and Contemporary Problems, 1978, 42, 57-76.

Farley, R. Racial integration in public schools, 1967 to 1972: Assessing the effects of governmental policies. Sociological Focus, 1975, 8, 3-26.

Farley, R., Richards, T., & Wurdock, C. School desegregation and white flight: An investigation of competing models and their discrepant findings. Sociology of Education, 1980, 53, 123-139.

Felice, L. G., & Richardson, R. I. Effects of desegregation on minority student dropout rates. Integrated Education, 1977, 15 (Nov.-Dec.), 47-50.

Fleming, J. Carnegie research project: Report to the board of directors. New York, 1980.

Giles, M. W., Catlin, D. S., & Cataldo, E. F. The impact of busing on white flight. Social Science Quarterly, 1974, 55, 493-501.

Hare, B. R. School desegregation and personality variation: An analysis of three national samples by race, SES, sex and region. Paper presented at the American Educational Research Association Meeting, San Francisco, 1979.

Haynes, L., III. The Adams cases: A critical sourcebook. Washington, D.C.: Institute for Services to Education, 1978.

Johnson, D. C., Smith, V. C., & Tarnoff, S. L. Recruitment and progress of minority medical school entrants 1970-73. Journal of Medical Education, 1975, 50, 713-755.

Labov, W. The logic of non-standard English. In Frederick Williams (ed.), Language and poverty. Chicago: Markham, 1970.

McClelland, D. C. Measuring motivation in phantasy: The achievement motive. In H. Gudtzkow (ed.), Groups, leadership and men. Pittsburgh: Carnegie Press, 1951.

McConahay, J. B. The effects of school desegregation upon students' racial attitudes and behavior: A critical review of the literature and a prolegomenon to future research. Law and Contemporary Problems, 1978, 42, 77-107.

McPartland, J. M. The segregated student in desegregated schools: Final report to the Center for the Study of the Social Organization of Schools. Baltimore: Johns Hopkins University, 1968.

Morris, L. Elusive equality: The status of black Americans in higher education. Washington, D.C.: Howard University Press, 1979.

Obgu, J. U. Minority education and caste: The American system in cross-cultural perspective. New York: Academic Press.

Pettigrew, T. F. Social evolution theory: Convergences and applications. In D. Levine (ed.), Nebraska symposium on motivating, Vol. 15. Lincoln, Nebraska: University of Nebraska Press, 1967.

Pettigrew, T. G. & Riley, R. T. Race and the outcomes of schooling. In F. Mosteller and D. P. Moynihan (eds.), On equality of educational opportunity. New York: Vintage Books, 1972.

Rist, R. Desegregated schools: Appraisals of an American experiment. New York: Academic Press.

Rossell, C. H. White flight. Integrated Education, 1975, 13 (6), 3-10.

Rosenbaum, J. E. Making inequality: The hidden curriculum of high school tracking. New York: John Wiley & Sons, 1976.

Scheehan, D. A study of attitude change in desegregated intermediate schools. Sociology of Education, 1980, 53, 51-59.

Schofield, J. W. and Sagar, H. A. The social context of learning in an interracial school. In R. C. Rist (ed.), Desegregated schools: Appraisals of an American experiment, pp. 155-199. New York: Academic Press, 1979.

Slavin, R. E., & Madden, N. A. School practices that improve race relations. American Educational Research Journal, 1979, 16, 169-180.

Smith, M., & Dziuban, C. D. The gap between desegregation research and remedy. Integrated Education, 1977, 15 (Nov.-Dec.), 51-55.

St. John, N. H. School desegregation: Outcomes for children. New York: John Wiley & Sons, 1975.

Stafford, W. Black faculty in predominantly white institutions: Preliminary report. New York: The Urban League, 1980.

Thomas, G. E. College characteristics and black students' four-year college graduation: An empirical evaluation. Forthcoming in Journal of Negro of Negro Education, 1981, summer.

Thomas, G. E., McPartland, J. M., & Gottfredson, D. C. The status of desegregation and black-white participation in higher education. Center for Social Organization of Schools, Report No. 298. Baltimore: Johns Hopkins University, 1980.

U.S. Commission on Civil Rights. Racial isolation in the public schools, Vol. 1. Washington, D.C.: U. S. Government Printing Office, 1967.

Valentine, C. A. Deficit, difference and bicultural models of Afro-American behavior. Harvard Educational Review, 1971, 33, 813-822.

Webster, J. The influence of interracial contact on social acceptance in a newly integrated school. Journal of Educational Psychology, 1961, 52 292-296.

Weinberg, M. Minority students: A research appraisal. Washington, D.C.: U.S. Government Printing Office, 1977.

Willie, C. V., & McCord, A. S. Black students at white colleges. New York: Praeger Press, 1973.

THE IMPACT OF DESEGREGATION ON GOING TO COLLEGE AND GETTING A GOOD JOB

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Abstract

The traditional rationale for supporting school desegregation is twofold: first, that students have a constitutional right to attend desegregated schools; second, that desegregated schooling will help to improve people by improving minority student achievement and reducing prejudice and stereotyping. This paper argues that recent evidence provides another, long-term rationale --that desegregated schooling may reduce specific barriers that exclude minorities from opportunities for career success.

The evidence shows that black workers are overrepresented in a restricted range of types of occupations, but attendance in desegregated schools may help produce a wider range of career choices and opportunities. Also, black adults who attended desegregated schools are more likely to function in desegregated environments (colleges, neighborhoods, places of work) later in life.

The paper calls for further research to more carefully define and study specific structural barriers to equal opportunities, and to investigate the relationship of desegregation to these structural factors.

Introduction

The way different groups understand the potential benefits of school desegregation may be of great importance to future progress in the area. This paper calls for new ways of thinking about why desegregated schooling can have worthwhile consequences. We argue that instead of concentrating only on how school desegregation may improve people by increasing student test scores or reducing prejudice and stereotypes, emphasis should be placed on how desegregated schooling can open opportunities for career success by reducing specific barriers that frequently exclude minorities from fair competition. We shall suggest that such a change in emphasis can significantly affect how various audiences evaluate school desegregation, including parents who are making school choices for their children and public officials who are developing policies to cope with major social problems.

The Need for a Broader Rationale

The belief that segregated schools exclude minority students from learning environments needed for optimal individual development provides the foundation for most legal and political rationales for school desegregation. It begins with the argument in the Supreme Court's 1954 Brown decision that segregation negatively affects the "hearts and minds (of minority children) in a way unlikely ever to be undone." And, although many subsequent desegregation cases have concentrated on the intent of school or housing policies in local areas, an interest by the courts in the effects on student learning has usually also affected the remedies

prescribed. Similarly, when political spokesmen disagree about future directions for school desegregation policies, their arguments usually include differences of opinion about the impact of school desegregation on student test scores and attitudes.

A broader rationale for thinking about school desegregation policies is suggested by recent research studies of the sources of unequal adult attainments. This rationale may generate a deeper understanding by relevant audiences of the long-term impacts of desegregation.

There is a growing awareness in the research community that race, sex, and age differences in career success are not fully explained by differences in human capabilities. Although the studies are still in their early stages, the research indicates that inequalities in educational and occupational attainments are also sustained by specific structural barriers in labor markets, organizations, and firms (Baron and Bielby, 1980; Stolzenberg, 1978; Jencks, 1980). These structural barriers involve not only overt discrimination, in which selection officials withhold positions from qualified minorities, but also include a variety of formal and informal practices that unintentionally but effectively prevent minority access to promising opportunities (McPartland and Crain, 1980). Thus, public policies that eliminate differences in the distribution of skills and training among different population groups would still leave significant inequities in adult success, due to the continuing influences of structural exclusionary barriers that work against minority opportunities. Desegregation policy deliberations should also take advantage of these research developments, by considering the possible links between school desegregation, various exclusionary processes, and long-term adult outcomes.

In the realm of public opinion and political support, various important audiences have had trouble with the limited rationale for school desegregation based on individual student improvement. A broader justification concerning ways in which desegregation may break down the exclusionary barriers to equal opportunities should contribute to more helpful discussions among these groups.

Many minority spokesmen have found the idea unattractive or unconvincing that the purpose of desegregated schooling is to improve minority student achievement (Hamilton, 1973). They reject any implications of this idea that minority students need to sit in classes with whites to learn, and that no all minority school can provide an optimum learning environment. As a consequence, minority opinion leaders are more comfortable arguing for school desegregation on the basis of constitutional rights (no students should be prevented from attending any particular public school because of their race) or from the perspective of power politics (minority students can get funding for first-rate educational facilities only if there are whites in their schools who can make effective demands on government officials.) Any new evidence that desegregation is tied to the structure of career opportunities, even if racially isolated schools can do just as good a job in teaching academic skills, would generate a useful basis for further discussion of the issue among minority parents and opinion leaders.

Similarly, problems arise with majority public opinion when school desegregation is defended primarily on the basis of raising minority student achievement. Under these terms, school desegregation policies can be judged as giving special compensatory advantages to minorities at

the expense and inconvenience of other citizens (Glazer, 1976). Further debate with this focus is unlikely to produce a broader consensus on the importance of school desegregation. On the other hand, there is deep appeal in this country for the goals of equal opportunity and fair competition. Thus, a better understanding of conditions that inhibit equal access to career opportunities is especially useful for constructive public policy debates. In particular, public discussions about school desegregation policies could be significantly enriched with new information showing how desegregation may open adult opportunity structures for minorities that are otherwise available to whites only.

State or federal agencies and policy makers concerned with employment inequities and discrimination do not usually propose solutions to reduce the unintentional exclusionary processes embedded in labor market and organizational structures. These agencies ordinarily are more concerned with reducing overt or intended discrimination in the labor market by establishing and enforcing fair employment practices. Racial segregation of schools is seldom considered as part of the problem by public officials concerned with equalizing adult career opportunities. A broader understanding of the role of desegregation in providing minority access to adult opportunities could gain the attention of public agencies and officials concerned with employment issues, who rarely consider segregation as directly relevant to their concerns.

Desegregation and the Structure of Opportunities

Although researchers have conducted only a few direct studies of the possible links between school segregation and the structure of opportunities, it is useful to consider some specific examples of conditions in

labor markets and firms that may place minorities at an unfair disadvantage. These examples indicate some of the major current directions in research on structural determinants of adult success, and argue that public policies are insufficient when restricted to the improvement of minority employment qualifications because exclusionary barriers remain that restrict equal access to opportunities. Where it exists, direct and indirect evidence will be cited to suggest that school desegregation plays a role in differential opportunity structures.

The structure of the labor markets

The first insight to be drawn from recent research is that the chances of occupational success differ among several distinct labor markets or types of work. No longer are researchers thinking that there is a single general labor market in this country or a single career process by which an individual's educational credentials and human talents become translated into occupational prestige, income or employment stability. Instead, different segments of the labor market or different occupational types are now being identified in which the chances of career success or the importance of education are generally not the same.

Evidence is acculumating that black workers are overrepresented in a restricted range of types of occupations, and that these so-called "traditional" fields of work offer less income payoff for each additional year of educational attainment than other occupational fields where blacks are underrepresented. (See, for example, Gottfredson, 1977, Marshall, 1974, Piore, 1977, Kallenberg and Sørensen, 1979, Wilson, 1978, Wright, 1978.) The separation of black and white workers into different types of occupations cannot be adequately explained by racial differences in educational

attainments and the educational requirements of different fields of work: one study estimates that educational factors account for less than half of the existing differences in racial distributions across fields of work (Braddock, Dawkins and McPartland, 1980). The studies indicate that income gaps will remain between many black and white workers, even if differences in educational attainments are lessened, as long as minority workers continue to be disproportionately relegated to a restricted set of labor markets and fields of work. A Congressional Budget Office (1977) study of income differences found major black-white differences across occupational categories net of region, sex and educational levels, and concluded: "Before the large part of the overall (racial) income disparities is removed, the occupational distributions, and particularly the distributions within subcategories of the major occupational groups, must be equalized" (See also, Kluegel, 1978).

The analysis of segmented labor markets that has received most attention is the notion of a dual labor market used to distinguish the sector of lower-level unstable jobs from the sector of upper-level career ladder jobs available in the economy. According to this view, blacks and other minority workers are more often channeled into the lower-level sector of jobs, which neither offers high pay and sustained employment nor leads to dependable career lines (See, for example, Beck, Horan and Tolbert, 1980, Spilerman, 1977, LaGorg and Magnani, 1979).

Some other studies of multiple labor markets have used typologies of occupations based on job requirements, characteristics of job occupants, and the regularities of movement of workers among jobs (Gottfredson, 1977, Gottfredson and Joffe, 1980). These studies provide a clearer

picture of the types of occupations in which minority workers are over or under-represented, and the income consequences of such concentrations. Black workers are found much more frequently than similarly educated whites in "social" occupations, such as education and social service jobs. For example, among the most highly educated workers in 1970, 47 percent of black men were in "social" occupations, compared with 19 percent of white men of similar age and education. And black workers are greatly under-represented in "enterprising" occupations, such as business management or sales, and in "investigative" occupations such as scientific work: for highly educated workers in 1970, 12 percent of black men compared with 39 percent of white men were in enterprising occupations, and 12 percent of black men compared with 21 percent of white men were in investigative occupations. Further study has also revealed that the income returns for increased education is much less for the occupational types in which blacks are overrepresented than for those in which blacks are underrepresented: an additional year of education is associated with an additional income of $200 to $300 per year in social occupations; $400 to $600 in investigative occupations; and about $1000 in enterprising occupations (Gottfredson, 1978a). Thus, the separation of blacks and whites into different segments of the occupational structure is a factor with important income implications, as blacks are channelled more toward fields that require extensive education for a high income but which pay off less for increases in educational attainments.

Is there reason to believe that school segregation contributes to continued racial separation in types of work, and that desegregation would produce a more rapid movement of minorities into the nontraditional fields that have frequently been closed to them in the past?

There is good evidence that the racial divergences in occupational expectations develop during the secondary school ages. At the college level, student choices of major fields show the same patterns of black over- and underrepresentation described above. A recent study of elementary and secondary student aspirations for different occupational types indicates that racial differences usually first occur during the junior high and senior high school ages. Data from the 1976 National Assessment of Career and Occupational Development show that the occupational expectations and values of black and white students are similar at elementary school age, but diverge toward the end of high school to match traditional race and sex stereotypes and continue to diverge after initial employment (Gottfredson, 1978b). Comparisons of the major fields of 1974 college students also demonstrate the continuing racial differences in occupational aspirations (Thomas, 1978). Among four-year undergraduates, blacks major in education, social sciences, and social work at a higher rate than whites; and they major in natural or technical sciences at a lower rate than whites. The racial differences in major fields at the graduate levels of higher education follow the same pattern and are even larger (Institute for the Study of Educational Policy, 1976, Thomas, 1981).

The only analyses currently available on the relationship between occupational outcomes and school desegregation have been based on data collected in a 1966 retrospective survey of black adults, most of whom had completed their elementary and secondary schooling before 1960. The study analyzed approximately 300 cases from the original sample of 1,624 black adults who had attended Northern high schools and who reported their current jobs in 1966 (Crain, 1970). It was found that black men

from desegregated schools were more likely to hold nontraditional jobs in sales, crafts, and the professions (33 percent) than those who attended segregated schools (21 percent).

Further work is needed to better understand why opportunities are restricted for minorities to move into certain labor market segments and occupational career lines, and to determine with more current data whether school desegregation helps to interrupt the processes that direct many minorities into the traditional and less promising directions. National longitudinal data sets have recently become available for these purposes, so we can expect improved research knowledge on these points. At this time, it is clear that the processes channelling minorities into a restricted range of careers are a very important source of income inequalities, and that these processes exist apart from differences in educational credentials and other relevant individual employment capabilities. Also, based on the limited research available, it seems reasonable to expect that school desegregation may be able to interrupt these processes for minority students and produce a wider range of career choices and opportunities.

The structure of firms

A second consideration derived from recent studies is that a firm's personnel selection practices and reward systems can affect the opportunities for different workers to find a job and establish a stable career (Baron and Bielby, 1980; Thurow, 1975). These practices may limit the access of potential minority applicants to formal and informal networks of information, contact, and sponsorship through which many jobs and promotions are obtained (Becker, 1979). In other words, structures may be in place

that unfairly limit the chances of minorities to know about and apply for job opportunities for which they are equally qualified. The claim can be made that segregation of schools limits the equal access to useful networks of information and sponsorship, and thus contribute to an exclusionary barrier to equal opportunities.

Research is currently establishing the importance of networks of opportunity for adult career success, especially informal social ties that can provide job information and employment sponsorship (Lin et al., 1981). There is less firm evidence that blacks and other minorities are frequently deprived access to the more effective networks, but some indirect research results imply that they are (Becker, 1979).

Similarly, there is a growing awareness that firms vary in their internal practices that influence how individuals enter specific jobs and receive promotions, but at present there is limited direct evidence on the specific variations and how they differentially affect whites and minorities (Baron and Bielby, 1980). Nevertheless, some research does support speculating that minorities are at distinct disadvantage regarding networks of opportunity and internal practices of firms, and that desegregation may help to penetrate some of these barriers.

There is very little evidence on the effects of segregation in limiting access to important informal networks of opportunity. Some indirect evidence, however, suggests that this is a promising area for future research.[1]

Most of this evidence comes from a study of 434 personnel managers of the largest employers in 15 major cities conducted in 1967 by Rossi et al. (1974) for the National Advisory Commission on Civil Disorders. In this study, each personnel manager reported the number of blacks among

the last 20 individuals who applied for work and among those who were hired at 3 broad skill levels (professional and white collar, skilled workers, and unskilled workers). This information was related to other data about each firm and about each city's labor supply, including the firm's personnel recruitment practices, the racial composition and size of the work force in the firm and the city, city differences in industrial composition, and the degree of concurrent school segregation and racial educational differences in the city.

The authors reasoned that the past employment practices of a firm (as measured by the percentage of blacks in the current work force) could be used as a variable to indirectly assess the importance of social networks of opportunity in the job recruitment process and the willingness of that firm to admit blacks in the hiring process. According to the authors, if the current racial composition of a firm is the best predictor of the rate of recent black application, we would have indirect evidence that the social networks through current black employees provide an important recruitment channel to reach potential new black applicants. If a firm's current racial composition is the best predictor of the rate at which black applicants have been recently hired, it could be inferred that a firm's evaluation of blacks as potential employees is more positive after it has had some experience with blacks in its work force. If current racial composition is the best predictor of both the rate at which blacks had recently applied and the rate at which black applicants were recently hired, it could be argued that both disadvantages of informal networks for blacks and racial preferences of firms for their employees can account for employment outcomes that discriminate against blacks. This study finds that the proportion of blacks in a firm's current work force is an important

predictor both of the likelihood that blacks had recently applied for work and of the fact that black applicants were recently hired, even after all other measured characteristics of the firm and the city (including racial composition of the city) were taken into account. The result was particularly strong for professional and white-collar applicants and hiring; in those occupations, the current percentage of blacks in the work force accounted for more variance than any other measured characteristic of the firm or city. Yet without time series data on rates of black employment, applications, and hiring in different firms, it is difficult to view the reported correlations as good evidence that social network mechanisms are actually operating to affect the employment access of minorities.

An analogous result has been obtained by Becker (1980) in his recent study of racial segregation in places of work. Becker used the Equal Employment Opportunity Commission survey of the racial composition of firms to calculate an index of the segregation of employment across firms for nine occupational levels. He found that the racial composition of an establishment's work force in one occupation is strongly related to its racial composition in other occupations, particularly for occupations within the blue-collar and white-collar subgroups.

Although the Rossi et al. data (1974) from personnel managers include direct measures on the recruitment channels used by firms and on the concurrent level of school segregation in each city, results using these measures were not consistent and strong in explaining differences of black application and hiring rates at each occupational level. The reported use of specific recruitment channels did not relate to minority rates of application or employment, but the authors point out the available data do not

indicate which channel was actually used by the black applicants or employees. The degree of school segregation in each city also fails to be significantly related to the rates of application or hiring of blacks by firms at any occupational level. However, this is not a test of the long-term effects of school segregation on occupational opportunities for blacks, because the measure was not of the school desegregation experiences of those blacks presently in the work force but of the segregation of students still in school who resided in the same city as the firms whose employment practices were being studied. The only research that links the school desegregation of blacks to their own later life employment success is the retrospective study conducted in 1966 for the U.S. Commission on Civil Rights (1968, Crain 1970). Although the sample size was small in this study and covered an earlier historical period, the study shows a positive effect of earlier school desegregation on present black income and job status. This study also suggests that black adults who had attended desegregated schools had developed a more useful social network for job referrals and had a better knowledge of specific job opportunities (Crain and Weisman 1973).

The perpetuation of segregation and perceptions of opportunity

A third implication of recent research is that segregation tends to be perpetuated across stages of the life cycle and across institutions when individuals have not had sustained experiences in desegregated settings earlier in life. Contributing to the social inertia that sustains segregation over time is the fact that segregated experiences may influence minority students' perceptions of opportunity.

Studies based on recent longitudinal data show that school desegregation affects the movement of minority students into desegregated settings after high school graduation. Comparing the adult behavior of blacks who had attended segregated or desegregated schools, it has been shown that those from earlier segregated school settings are more likely at later stages in their life to be in segregated colleges and segregated work groups, while whose who graduated from desegregated schools are more likely to enter desegregated college and work groups. The phrase "perpetuation of segregation" has been used to characterize these processes.

The evidence on the effects of earlier school desegregation on attending desegregated colleges is drawn from studies that included statistical controls on factors such as the students' region, social class background, college admissions credentials (high school grades and test scores) and residential proximity to alternative colleges (Braddock and McPartland, 1981, see also Braddock, 1980). Using national longitudinal data from over 3,000 black students who graduated from high school, these studies find both direct and indirect effects of earlier school desegregation on attendance at desegregated colleges.

In the South, where a large number of both predominantly black and

predominantly white two-year and four-year colleges are available, elementary-secondary school desegregation directly affects black student enrollment at desegregated colleges. The rate of black student attendance at some college was about the same for those from segregated or desegregated elementary and secondary schools, but the choice of a desegregated college was significantly higher for those with earlier experiences in desegregated schools before high school graduation. This effect on the choice of a desegregated college was especially strong for students entering four-year institutions.

In the North, both majority black and majority white two-year colleges are widely distributed, but almost all four-year institutions are majority white. A direct effect of early desegregation was found among Northern black students who entered two-year colleges--the enrollment rates at desegregated institutions were significantly higher for those who came from desegregated elementary and secondary schools. Direct effects could not be assessed for four-year college students, because almost all four-year institutions in the North are desegregated--there are no segregated options for black four-year students to choose. However, studies of Northern students did reveal a significant positive impact of early school desegregation on whether a black high school graduate enrolled at all in a four-year college: black students from Northern desegregated elementary and secondary schools were significantly more likely than black students from segregated schools to attend some four-year college, after controlling on family background and college qualifications (See also Crain and Mahard, 1980). Thus, desegregated elementary and secondary schools are creating a greater proportion of blacks who enroll in desegregated colleges than are created by segregated elementary and secondary schools. In other words, there is an indirect effect for Northern blacks of early school desegregation on attendance at desegregated four-year colleges, due to the

direct positive influence on enrollment at some Northern four-year college.

Preliminary evidence also indicates that earlier experiences in desegregated schools affect the likelihood that blacks will be members of desegregated work groups as adults. Tabulations from a 1979 followup survey of a national sample of black adults who were college freshmen in 1971 show that individuals from desegregated high schools are significantly more likely than segregated high school graduates to be working in a desegregated work group.[2] These studies are preliminary and require careful statistical controls to more firmly establish the direct relationship between school desegregation and employment desegregation, but they provide the first available investigation of this relationship and are based on a large sample of students who had entered college.

Some other studies also suggest that students who attended desegregated schools are more likely to function in desegregated environments in later life, and that this relationship may be due in part to the influence of desegregated schooling on minority students' perception of opportunities. An earlier study based on a 1966 retrospective survey of adults reported that both black and white adults who attended desegregated schools were more frequently found to live in desegregated neighborhoods, to have children who attended desegregated schools, and to have close friends of the other race than did adults of both races who attended segregated schools (U.S. Commission on Civil Rights, 1967). The same data provide evidence that Northern blacks from desegregated schools have a stronger sense that occupational opportunities are available to them (Crain and Weisman, 1972). Other studies have also pointed to the effects of school desegregation on black students' sense of personal efficacy (Coleman et. al., 1966) and on desegregated college students' perceptions of fairer opportunities to get a good job (McPartland and Crain, 1980).

In our view, the strongest direct research evidence available at this time of the long-term effects of elementary-secondary school desegregation pertains to the perpetuation of segregation. Minority students who have experienced desegregation earlier in their lives are found to be moving more often and more successfully into desegregated settings as adults. It will be important to extend future research to examine other important measures of adult accomplishment and participation, including income attainment and involvement in political and civic activities and leadership.

School Desegregation and Public Policy

Experience in recent decades has taught us that the problems of racial inequalities in adult life are deeply complex, and public policies aimed simply at reducing gaps in human capabilities and eliminating overt discrimination will be painfully slow at best in dealing with the problems. Recent research helps us understand some of the complexities, and reveals specifically that structural barriers exist which restrict minority opportunities even though no individual or organization may be intentionally imposing these restrictions. Put another way, we are beginning to learn that "discrimination" is a poor word to characterize the continuing exclusionary barriers, because unequal opportunities frequently are imbedded in structural processes and inaccurate perceptions that go beyond bad intentions or selfish judgments (Alverez et al, 1979; Crain and Weisman, 1972; Feagin and Feagin, 1978). The task for public policy is to incorporate this perspective into effective programs that deal with the true complexities of unequal opportunities and exclusionary processes.

Segregation of schools may be related to the structure of opportunities; and desegregation may be a viable public policy alternative if viewed in the long run and in the context of inequities of adult life. We already have some evidence that current progress in planned school desegregation programs is an investment for the future, in the sense that graduates of desegregated schools are more likely as adults to freely choose desegregated colleges, neighborhoods, places of work, and schools for their children, reducing the need for future public policies in these areas. More generally, there is some reason to believe that school desegregation may be linked to the equal access for minorities to the structural opportunities for adult success. Desegregation may help penetrate the continuing exclusionary barriers that channel blacks in less promising directions, limit their access to useful networks of information and sponsorship, or create special burdens that foreclose consideration of potential opportunities. The task for research is to more carefully define and study specific structural barriers to equal opportunities, and to investigate the possible linkages of desegregation to these structural factors. This work needs to broaden discussions of problems of adult inequities beyond the concentration simply on problems of overt discrimination and differences in human capabilities, which can only account for a limited part of the problem, to include an awareness of structural barriers that limit opportunities. Likewise, public policies such as school desegregation should be considered for their potential effects not only on improving student learning but also on opening opportunities.

Footnotes

[1]The following discussion is largely drawn from McPartland and Crain, 1980, 114-115.

[2]Personal communication from Kenneth C. Green, Higher Education Research Institute, Los Angeles, California.

REFERENCES

Alvarez, R., Lutterman, K.G. and Associates. Discrimination in Organizations. San Francisco: Jossey-Bass, 1979.

Baron, J.N. and Breiby, W.T. Bringing the firms back in: stratification, segmentation, and the organization of work. American Sociological Review, 1980, 45, 737-765.

Beck, E.M., Horan, P.M. and Tolbert, C.M. Industrial segmentation and labor market discrimination. Social Problems, 1980, 28, 113-130.

Becker, H. J. Personel networks of opportunity in obtaining jobs: racial differences and effects of segregation. Paper presented at annual meetings of American Educational Research Association, San Francisco, April, 1979.

Becker, H. J. Racial segregation among places of employment. Social Forces, 1980, 58, 761-776.

Braddock, J.H. The perpetuation of segregation across levels of education: a behavioral assessment of the contact - hypothesis. Sociology of Education, 1980, 53, 178-186.

Braddock, J.H., Dawkins, M.P. and McPartland, J.M. Black Participation in the American Occupational Structure: Alternative Strategies for Measuring Over - and Under-Representation. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1981.

Braddock, J.H. and McPartland, J.M. Assessing school desegregation effects: new directions in research. In Corwin, R. (ed.), Research in Sociology of Education and Socialization, Vol. 3. Greenwich, Conn.: JAI Press, in press.

Coleman, J.S., Campbell, E.Q. Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D. and York, R.L. Equality of Educational Opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

Congressional Budget Office. Income Disparities Between Black and White Americans. Washington, D.C.: U.S. Government Printing Office, 1977.

Crain, R.L. School integration and occupational achievement of Negroes. American Journal of Sociology, 1970, 75, 593-606.

Crain, R.L. and Mahard, R.E. School racial composition and black college attendance and achievement test performance. Sociology of Education, 1978, 51, 81-101.

Crain, R.L. and McPartland, J.M. Minority employment opportunities: preliminary analysis of effects of school and college desegregation. Paper presented at annual meetings of American Educational Research Association, Boston, April, 1980.

Crain, R.L. and Weisman, C.S. Discrimination, Personality and Achievement. New York: Seminar Press, 1972.

Feagin, J.R. and Feagin, C.B. Discrimination American Style. Englewood Cliffs, N.J.: Prentice Hall, 1978.

Glazer, N. Affirmative Discrimination. New York: Basic Books, 1975.

Gottfredson, G.D. and Joffe, R.D. An Evaluation of Mobility-Based Occupational Classifications for Placement of Job Applicants. Baltimore, Center for Social Organization of Schools, Johns Hopkins University, 1980.

Gottfredson, L.S. A Multiple-Labor Market Model of Occupational Achievement. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1977.

Gottfredson, L.S. An analytical description of employment according to race, sex, prestige, and Holland type of work. Journal of Vocational Behavior, 1978a, 13, 210-221

Gottfredson, L.S. Race and Sex Differences in Occupational Aspirations: Their Development and Consequences for Occupational Segregation. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1978b.

Hamilton, C.V. The nationalist vs. the integrationist. Pp. 297-310 in Mills, N. (Ed.), The Great School Bus Controversy. New York: Teachers College Press, 1973.

Institute for the Study of Educational Policy. Equal Educational Opportunity for Blacks in U.S. Higher Education: An Assessment. Washington, D.C.- Howard University Press, 1976.

Jencks, C. Structural versus individual explanations of inequality: where do we go from here? Contemporary Sociology, 1980, 9, 762-767.

Kallenberg, A. L. and Sørenson, A. B. Sociology of labor markets. Annual Review of Sociology, 5(1979):35-379.

Kluegel, J.R. The causes and cost of racial exclusion from job authority. American Sociological Review, 1978, 43, 285-301.

Lagory, M. and Magnani, R.J. Structural correlates of black-white occupational differentiation: Will U.S. regional differences in status remain? Social Problems, 1979, 27, 157-169.

Lin, N., Vaughn, J.C. and Ensel, W.M. Social resources and occupational status attainment. Social Forces, 1981, 59, 1163-1181.

Marshall, R. The economics of racial discrimination: a survey. Journal of Economic Literature, 1974, 12, 849-871.

McPartland, J.M. Desegregation and equity in higher education and employment: is progress related to the desegregation of elementary and secondary schools? Law and Contemporary Problems, 1978, 43(3), 108-132.

McPartland, J. M. and Crain, R. L. Racial discrimination, segregation, and processes of social mobility. In Covello, V. T. (Ed.), Poverty and Public Policy: An Evaluation of Social Science Research. Boston: G. K. Hall, 1980.

Piore, M.J. The dual labor market. Pp. 93-97 in D. Gordon, ed., Problems in Political Economy, 2d ed. Lexington, Mass.: D.C. Heath, 1977.

Rossi, P.H., Berk, R.A. and Erdson, B.K. The Roots of Urban Discontent: Public Policy, Municipal Institutions, and the Ghetto. New York: Wiley, 1974.

Spilerman, S. Careers, labor market structure, and socio-economic achievement. American Journal of Sociology, 1977, 83, 551-593.

Stolzenberg, R.M. Bringing the boss back in: employer size, employee schooling, and socio-economic achievement. American Sociological Review, 1978, 43, 813-828.

Thomas, G.E. Equality of Representation of Race and Sex Groups in Higher Education: Institutional and Program Enrollment Statuses. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1978.

Thomas, G.E. Black Students in Higher Education: Conditions and Experiences in the 1970's. Westport, Conn.: Greenwood Press, 1981.

Thurow, L.C. Generating Inequality. New York: Basic Books, 1975.

U.S. Commission on Civil Rights. Racial Isolation in the Public Schools, Vols. I and II. Washington, D.C.: U.S. Government Printing Office, 1968.

Wilson, W.J. The Declining Significance of Race. Chicago: University of Chicago Press, 1978.

Wright, E.O. Race, class, and income inequality. American Journal of Sociology, 1978, 83, 1368-1397.

ASSESSING SCHOOL DESEGREGATION EFFECTS:

NEW DIRECTIONS IN RESEARCH

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Abstract

Questions about the impact of school desegregation lie in the realm of social science research. This paper examines some of the shortcomings and dangers of that research and indicates new research directions that could contribute more useful policy information.

School desegregation policies should be formulated on the basis of the best evidence about the costs and benefits for the major parties involved. What has been largely missing from the deliberations on this issue is clear evidence on the long-run consequences of individual attendance at racially mixed elementary or secondary schools and the eventual community structures that follow experience with school desegregation programs (McPartland, 1978). Instead, the research evidence has primarily focused on the short-term outcomes for students, such as academic test scores and racial attitude measures, and on the reactions of different publics to the desegregation controversy, such as estimates of white student withdrawals from desegregating schools and surveys of opinion on desegregation topics.

As the debates continue on the future of public programs to foster school desegregation, more research attention must be focused on whether the attainment of racial equity and desegregation in adult life depends to any important degree on the racial character of elementary-secondary schooling.

Studies in the area of school desegregation provide an interesting vantage point for examining the use of social research in public policy deliberations, because social science evidence has been used at each stage of the policy formulation process (Lynn, 1978; Weiss, 1978). At different stages of the debates about school desegregation policies, different problems in the availability and use of social research have appeared. To examine these problems we will briefly review how research has and has not entered at three points in the process: when broad theoretical frameworks on the etiology of major social problems are sought to identify general points of public policy intervention; when evidence is accumulated on the actual costs and benefits of current policy to decide how well it is working in the typical situation; and when information is needed on the conditioning variables of public policy interventions to identify the implementation supports needed for specific programs or to specify the constraints and incentives that affect the feasibility of particular policy alternatives. Following this review, we will offer some new empirical evidence on school desegregation effects as an example of research directions that can address major problems at some of these stages.

I. How Social Research Has and Has Not Entered the Formulation of School Desegregation Policy

School desegregation is an unusual issue because it is argued both as a constitutional question of individual rights and as a public policy question of how to address the social problems of race relations and equity of attainments. Different factual questions are relevant for the constitutional and social policy concerns and different empirical studies are needed in each case. The constitutional question concerns identifying the factors that create segregated schools, and evidence is sought on whether official actions have

directly or indirectly fostered segregation in a local area (Orfield, 1978; Yudof, 1978, 1980). The social policy question involves the effects of school desegregation on individuals and communities, and evidence is required on the short- and long-run consequences of the programs that bring about racially and ethnically mixed schooling. In terms of the familiar social science model of cause and effect, school segregation-desegregation is the dependent variable in the first case and is the independent variable in the second case.

Of course, it is not always so simple in practice to divide the social policy and constitutional issues into questions of school segregation-desegregation as cause or as effect. There is always the complicated question of whether certain desegregation policies themselves create problems for future desegregation--by contributing to the departure from a district of the white students needed for desegregation, for example (Mills, 1979), or whether current school desegregation policies can establish a positive foundation for future interracial schooling--by encouraging a desegregated housing market (Orfield, 1980) or by fostering positive attitudes in future parental generations toward school desegregation (Crain, 1970). Nevertheless, it is useful when thinking about the use of social research in school desegregation debates to divide the issue into evidence on the local sources of school segregation and evidence on the impact of school desegregation on individuals and institutions. Most of the time legal research teams provide the detailed evidence in local situations on the sources of segregated schools, but we are particularly dependent upon the techniques and efforts of social science researchers to empirically investigate the school desegregation impact questions. However, the recent history of social science contributions to these questions indicates major shortcomings and dangers.

First, social science research has focused primarily on the gross effects of school desegregation as typically practiced, rather than on specifying the conditions upon which desegregation may depend. Consequently, research has provided few clear leads on how to best implement current school desegregation policy, or on what tradeoffs are involved in specific alternative policies to achieve school desegregation.

Research has not been very helpful with practical questions of implementation or alternatives, even though clear practical questions have been raised in the policy debates. While new student and staff assignment plans are drawn in different school districts each year for the purpose of desegregation, research has provided few leads on the advantages and disadvantages of different racial and social class combinations of students and staff at different grade levels in schools of different sizes (Crain and Mahard, 1979a). Although legislation and litigation are currently considering alternative desegregation policies that contrast mandatory or voluntary approaches and within-district or cross-district areas, few empirical studies have identified how specific incentives and constraints can affect the way each alternative would work (Meadows, 1976). And despite the fact that millions of federal dollars are dispensed each year for technical assistance and support services in desegregated districts, limited research is available to direct these funds toward dependable approaches for improving the relevant community climates or internal school practices.

Instead of directly studying different approaches and practices for school desegregation, most research has examined the effects of desegregation "on the average," as "typically" practiced, with little regard to alternatives or implementing conditions (St. John, 1972; Crain and Mahard, 1979a, 1979b). To account for this research imbalance, some writers have

noted that academic career incentives draw researchers toward "basic research" studies of broad theoretical issues, and away from "applied" studies of the detailed comparisons that would be of most use to address practical questions (Crain, 1976). In support of this view, it appears that the few existing direct studies of implementation and policy alternative questions were usually generated by funding of research contracts through government Requests for Proposals (RFPs) that specified the exact research questions (e.g., Forehand et al., 1976; Coulson et al., 1977), rather than by funding of research grants from general program announcements, unsolicited grant opportunities, or long-term programmatic research support where researchers themselves defined the specific questions to be studied.

Second, even where social science research has been most active--studying the average gross effects of school desegregation--there has been a serious imbalance of empirical evidence affecting policy deliberations. A limited range of short-term outcomes has been studied to assess the average effects of current desegregation policies (Mills, 1973, 1979). The practical consequence has been to narrow the public policy debates to the few topics where research has been most active.

Although school desegregation has generated hundreds of research studies since the mid-1960s, most have been devoted to two topics: the effects of desegregation as typically practiced on the short-term academic achievement of students, and the change in white enrollments ("white flight") in school districts due to desegregation activities. In contrast to these dominant issues, few studies have examined broader impact questions such as long-term career and adult participation consequences or community institutional outcomes. We have little contemporary reliable evidence on whether students from desegregated elementary and secondary schools have more long-run success in higher education, employment, and income; whether school

desegregation contributes to desegregation progress in colleges, places of work, and neighborhoods; and whether school desegregation experiences have effects on attitudes and behaviors across generations when students become adults and parents.

An apparent danger of this imbalance in school desegregation research is that the questions receiving most research attention have also become the questions receiving most consideration in the policy area, crowding out interest in important topics of costs and benefits that would otherwise be of substance and significance in the public debates. It has frequently been said that social science research is used as "ammunition" in public policy debates by the interests whose arguments it supports. It seems that in the area of school desegregation, research information has been such a powerful weapon that it has actually constrained the debate to topics on which research has something to say.

On the other hand, some have argued that the problem of current social science evidence is not that it encourages premature closure of debate on a limited set of relevant topics, but instead, by offering only continuing rounds of unresolved technical disputes or complex scientific arguments, plays a minor or confusing role in shaping policy debates (Cohen and Weiss, 1976). This point of view can also be exprssed as the third problem of social science evidence in school desegregation debates.

The third problem is that social science studies about school desegregation have rarely been embedded in rich theories of social mobility, community power, or discrimination. Because we use narrow theoretical perspectives to generate research on school desegregation effects, social researchers have failed to direct the policy debates on this issue toward a renewed public interest in the contemporary meaning of traditional Ameri-

can ideals, such as equal opportunity, social justice and individual rights. The absence of richer theoretical perspectives has also separated the school desegregation issue from current policy thinking on social problems such as employment inequalities and discriminations (McPartland and Crain, 1980).

Implicit in most social research is a test of the narrow theoretical rationale that school desegregation changes individuals by improving the competencies of minority students or the racial attitudes of all students. Yet there is growing agreement among social scientists that present theories of adult attainment, which concentrate on individual skills and how they are translated into positions in employment, housing, or higher education, are inadequate. These models fail to explain most of the variance in adult success or to account for some crucial features of current inequalities, such as the continuing concentration of women and minorities in a restricted range of careers and the non-economic housing segregation of blacks and whites but not of other ethnic groups. This suggests some research directions to introduce more sophisticated understandings of contemporary social processes into the debates on the rationale for school desegregation as a public policy. As we shall argue in more detail in the final section of this chapter, frameworks and studies are needed to identify the specific processes that continue to exclude qualified minorities from promising opportunities and to ask whether segregation plays a role in these processes.

Data availability plays an important part in each of the three social science problems identified in the use of social research in school desegregation policy. Practical questions have not been addressed sufficiently because social science surveys have often failed to include measures of the internal practices of racially mixed schools or to carefully sample comparison cases that permit study of alternative desegregation programs.

Evaluations of the effects of current practice have concentrated on narrow short-term student outcomes, because longutudinal data from elementary-secondary school experiences into adult periods of attainment are difficult to obtain. And the typical empirical design that compares experiences of individuals (rather than also contrasting institutional and market processes) invites the restricted theoretical frameworks for thinking about school desegregation impacts.

To more fully appreciate how an expanded research agenda may contribute more useful policy information about school desegregation, it is helpful to examine research on a specific long-term question and to consider how it could contribute to improved policy deliberations. With this in mind, we shall present new research, using recently available longitudinal data, on the effects of elementary-secondary desegregation on the college-going behavior of minority students.

II. Effects of Elementary-Secondary School Desegregation for Minority Students in Higher Education

School desegregation as a social policy question should be decided with the best evidence about the costs and benefits for the major parties involved. What has been largely missing from the deliberations on this issue is clear evidence on the long-run consequences of individual attendance at racially mixed elementary or secondary schools and the eventual community structures that follow experience with school desegregation programs (McPartland, 1978). Instead, as noted, the research evidence has primarily focused on the short-term outcomes for students, such as academic test scores and racial attitude measures, and on the reactions of different publics to the desegregation controversy, such as estimates of white student withdrawals from desegregating schools and surveys of opinion on desegregation

topics. As the debates continue on the future of public programs to foster school desegregation, it is desirable that more attention be given to whether the attainment of racial equity and desegregation in adult life depends to any important degree on the racial character of elementary-secondary schooling.

There are some obvious reasons why social research has not contributed more information on the long term consequences of school desegregation. Besides the conceptual complexities of specifying a model that adequately reflects the major variables operating over an extended time period to explain adult attainments or community developments, the data needed for research on the long-term outcomes of desegregated schooling are very hard to come by. Studies of school desegregation effects on adult attainments and desegregation requires longitudinal information for recent representative samples on individuals' experiences in elementary-secondary schools and their accomplishments several years later.

College experience is the important post-high school outcome for which data are available to seek better research evidence on the adult consequences of school desegregation. In particular, the National Longitudinal Survey of the High School Graduating Class of 1972 provides data for large national samples of students and their college experiences for the five years following high school completion. We will present results from investigations with the black sample from this data source on the relationships between elementary-secondary desegregation and college attainments and college desegregation.[1] There have been a few previous studies on this topic, but these efforts have been hampered by less adequate data sources. These studies include a retrospective survey of black adults, a small scale survey of black college students, some small follow-up studies of unusual

secondary school desegregation experiments, and recent longitudinal surveys of national samples of young adults of both races.

A. Previous Research

In 1966, the U.S. Commission on Civil Rights sponsored a wide-ranging interview survey of 1624 black adults. The respondents recalled whether they attended segregated or desegregated elementary and secondary schools (about 650 had attended desegregated schools) and also reported on their subsequent educational attainments. Although the historical period of the school experiences in this study extended from the 1930s to the early 1960s--the adult survey population was ages 17 to 45 in 1966, living in metropolitan areas of the North and West--these data provided the first measurement of desegregated schooling and later life outcomes for a minority population.

Using these data, Crain (1970) reports that blacks who attended desegregated schools are more likely to have finished elementary and high school and to attend and finish college. Thirty-two percent of Northern-born men from desegregated schools went to college compared to 24 percent of Northern-born men from segregated schools, and the differences for women are small but in the same direction. The sample size of college graduates was very small but also tended to favor blacks from desegregated schools. These analyses controlled on whether birthplace was North or South, at what age the respondent moved North, and parental background measures.

Using data obtained in 1972 from 253 randomly chosen black students attending two traditionally white and two traditionally black colleges (matched on public vs. private control and SMSA location) in the state of Florida, Braddock (1980) related attendance at desegregated high schools to attendance at desegregated colleges. Sex and social class as background

variables along with schooling and achievement factors (high school racial composition and grade point average) and college inducements (academic reputation, financial aid, low cost) were linked in a causal model to the predominant racial type of the college attended. The results indicated that choice of a desegregated college depends on the various types of antecedents, with desegregation practice--the experience of having attended a desegregated high school--manifesting one of the largest direct and total effects. Only high school grades and college cost showed larger unmediated effects. This study, however, was geographically restricted, excluded two-year colleges, and was based on a relatively small sample.

Two studies of small samples of black students who participated in unusual desegregation programs relate college attendance to desegregation before high school. In an otherwise negative assessment of the effects of desegregation experiments, Armor (1972) reviews evaluation studies of the two situations where effects on college attendance were measured and some positive outcomes were noted. Both situations involved small numbers of students and unusual desegregation programs. The METCO program is a voluntary busing program across district lines in metropolitan Boston, for which college data were obtained in 1972 for thirty-two bussed and sixteen control group students (who were siblings of the desegregated students) which represented about two-thirds of the original comparison groups of high school seniors in 1970. Armor reports that the METCO-bussed students were much more likely to start college than the control group, but also had a much higher dropout rate from college. By the end of the sophomore year, Armor reports there were no large differences in college attendance favoring the METCO-bussed students, although the METCO students who remained in college were enrolled in higher-quality institutions (four-year colleges and

universities) than the control group. Pettigrew and others (1973) argue that the positive evidence for the METCO program is stronger than Armor suggests: the dropout rate of METCO students from four-year colleges and universities was no worse than for white students nationally, and large differences continued to favor METCO students enrolled in such institutions (56 compared to 38 percent remained in four-year colleges, and 43 compared to 12 percent remained in universities). A second study reviewed by Armor (1972) that suggests some positive effects on post-high school education is the ABC (A Better Chance) program. This follow-up study in 1971 of the first year of college involved about forty high-ability black students who had participated in the highly selective ABC program of scholarships to predominantly white high-prestige private secondary schools and residential public schools. These forty were matched with a control group of black students of similar background and achievement levels who had applied to the ABC program but who could not be placed due to a cutback in federal funding. All the ABC students entered colleges, as compared to about half the control group, and the ABC students enrolled in considerably higher-quality colleges than the control group. Follow-up data on differential dropout rates were not available for study.

In addition to the data we will report next, two other longitudinal surveys that followed up students after high school have been studied to address questions of desegregation effects on black students' college success. These studies, on the Project TALENT survey and on the Youth in Transition survey, involved very small and unrepresentative samples of black students, so the results do not have much force. However, a continuing longitudinal survey of the high school graduating class of 1972 includes a large representative sample of black students and promises to be an

important source of research data.

In the Project TALENT study, which used 1965 five-year follow-up data from an original 1960 student sample, students were not asked their race in the initial survey. Because the overall response rate was very low (39 percent) to the follow-up that asked for racial identification, there is no way to know either the response rate for blacks or the extent of the bias. From an original sample of over 90,000, only 224 blacks were included in the desegregation study, of whom only 74 had attended desegregated schools. For what it is worth, this study did not find any positive or negative school desegregation influences on post-high school education (Kapel, 1968, 1969). In the Youth in Transition study, comparisons have been made one year after high school between black subsamples of 73 students in desegregated schools, 72 in segregated Northern schools, and 111 in segregated Southern schools. An overall 1970 follow-up rate of 80 percent from a nationally representative sample of 2213 black and white high school students provided these comparison groups. Results suggest that the social mobility processes of desegregated blacks more closely approximate the processes for whites, in contrast to the usual finding of large black-white differences in the importance of academic performance and socioeconomic background for advanced education attainments (Portes and Wilson, 1976).

In all the research reviewed above, the inadequacies of the data are too serious to view the findings as anything more than suggestive. Either the sample size is tiny, the problem of sample attrition is extreme, or the period or location of the sample is highly restricted and unrepresentative of current conditions affecting most black students. Fortunately, national data are now available that are much more appropriate to the task.

B. Evidence from the National Longitudinal Survey

The National Longitudinal Study (NLS) of the High School Graduating Class of 1972 provides data on a large sample of high school students surveyed as seniors in 1972 and later in 1973, 1974, and 1976 (Levinsohn et al., 1978). The sample included over three thousand black respondents, of whom about a thousand attended Northern high schools and two thousand attended Southern high schools. In each region, there appears to be a sufficient sample of students from both segregated and desegregated elementary or secondary schools to examine questions about effects on college attendance. In addition, the follow-up response rates have been unusually good, exceeding 90 percent for each of the three follow-up surveys. On the other hand, there is no way in this study to control for differential high school dropout rates, because only high school seniors were initially sampled, and critical data on achievement test performance in high school are missing for about 30 percent of the sample.

In this section we present our own current research which examines, for black young adults, the long-term effects of elementary-secondary school desegregation on higher educational attainments. This research examines questions of enrollment access, retention, and desegregation in higher education, and extends earlier analyses on this topic with the NLS survey (Eckland, 1979; Crain and Mahard, 1978) by using data that follow students for five years after high school graduation and by refining the variables under study. This involves defining college attendance and completion rates more carefully, making proper distinctions between two-year and four-year institutions, and specifically treating possible bias arising from the omission of significant proportions of the sample due to missing data for some variables. In preparing the data for these analyses, we edited all

cases to establish attendance at a true two-year or four-year college and to identify the racial composition of the colleges attended by each black respondent.

The main question of our studies is whether black students' attendance at desegregated elementary and secondary schools is related to their attendance at college, especially desegregated institutions, after taking into account individual differences in academic qualifications for college and the location of the relevant high schools and colleges. For this purpose, it was first necessary to develop desegregation measures for each educational level.

The student questionnaire provides the basis for the elementary-secondary school desegregation measure. Each student was asked to report the percentage of white students in his or her classes in grades 3, 6, 9, and 12. By scoring each grade "1" if the student reported at least 25 percent white enrollment and summing across the four grades, an index was constructed with values that ranged from 0 to 4 for the number of grades in desegregated elementary and secondary schools. The top panel of Table 1 presents the distribution of black students in the North and South on this measure. These data show that at the elementary-secondary school level, Northern blacks, as expected, have more extensive desegregation experiences. For example, when one considers whether the black students had attended a school with at least a 25 percent white student body during either the third, sixth, ninth or twelfth grades, striking regional differences appear. We see, in the upper panel of Table 1, that Northern blacks (15.4 percent) are five times as likely as Southern blacks (3.0 percent) to have had a desegregated experience throughout both elementary and secondary schools. While this finding is to be expected, it is surprising that Northern blacks (46.6 percent) are somewhat more likely than Southern blacks (43.9 percent) to have

had no desegregation experience at all, in either elementary or secondary school.

Table 1 About Here

To measure college desegregation, it was necessary to merge college racial proportions from the DHEW office of Civil Rights Surveys of Racial and Ethnic Enrollment Data from Institutions of Higher Education with NLS student data. On the NLS follow-up surveys, each student indicated whether he or she was enrolled in college for each of the five years from 1972 through 1976 and gave the name of the college. Each of the colleges named was checked with the Office of Civil Rights survey, to establish whether it was a true two- or four-year college and to code the institution's racial composition for the appropriate year. From these merged data, indices were constructed for each individual student to measure the number of years in college from 1972 through 1976 (with possible values of 0 through 5) and the number of years in desegregated colleges with at least 50 percent white enrollment for the same period (also with possible values 0 through 5). The bottom panel of Table 1 presents the black student distributions on these measures for each region.

Examining the distribution of blacks in higher education, we again find that Northern blacks have had more extensive desegregation experiences. By 1976, for example, the Northern black high school graduate (class of '72) with college experience is nearly twice as likely (44.6 percent) as his Southern counterpart (24.6 percent) to have matriculated at a college or university with greater than 50 percent white enrollment. When the tabulations are presented separately for attendance at four-year and at two-year institutions, the regional differences in desegregation are large for the four-year case only. For black students who have attended four-year institutions, nearly ten times as many in the North experience desegregated

institutions as segregated ones (31.0 percent vs. 3.8). But in the South, where most traditionally black four-year institutions exist, more black students attend majority black colleges than majority white ones (17.6 vs. 14.6). However, in the case of black students who have attended two-year institutions, the regional desegregation differences are not large. Even though two-year college experience is more characteristic of Northern black students, slightly more than half as many have attended mostly black schools as white ones in this region (9.8 vs. 18.3), while in the South slightly less than half as many black students have attended two-year majority black schools as majority white ones (5.7 vs. 12.3 percent).

C. Is Segregation Self-Perpetuating?

The foregoing distributions, across levels and regions, show the diverse exposure of black young adults to desegregated school experience. Our research task is to investigate whether racial segregation is self-perpetuating across educational levels. By examining the segregation-desegregation patterns of students across levels of education, we provide one measure of the success of school desegregation as a national domestic policy aimed at incorporating black Americans into society's mainstream.

We have employed multiple regression analysis to estimate the net or direct effects of elementary-secondary school experience on various measures of black educational attainment, after taking into account family background and academic qualifications for college. The variables to be used, in addition to the desegregation measures already discussed, include:

1. Sex (code: male=0; female=1/North:μ = .56; σ = .25/South: μ = .56; σ = .25).
2. Social class (North: μ = 4.22; σ = 5.29/South: μ = 6.51; σ = 5.63.) The social class measure used in the NLS project is an index which

pools data on parents' education, family income, father's occupation, and the existence of various household items indicative of personal wealth. These components are standardized so that each carries equal weight in the scale.

3. High School Achievement Test scores (North:μ = 44.05; σ = 8.76/ South: μ = 41.80; σ= 8.54). The achievement measure is the scaled reading test score, a subscale of the overall battery of tests developed for the NLS by the Educational Testing Service.
4. High school grades (North:μ = 3.59; σ= 1.25/South:μ = 3.68; σ= 1.34). High school grades are measured by student reports obtained from the base year survey conducted in 1972. Grades are scores on an eight-point scale ranging from "mostly A" = 8 to "below D" = 1.

In our first analyses that include the entire black sample, it is necessary to estimate the net effect of desegregation before high school graduation on attainment in college regardless of the institution's racial composition before the effect on attainment at a desegregated college can be assessed. The case for the perpetuation of segregation across educational levels is made only if the net effect of elementary-secondary desegregation is substantially greater for desegregated college attainment than for college attainment in general.

Table 2 presents a summary of the results of the multiple regression analyses for the full model by region. To facilitate comparisons across

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Table 2 About Here
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regional groups for the same equations, unstandardized or metric regression coefficients are presented along with the standardized regression coefficients (partial betas) for comparisons of effects within regional groups.

Coefficients are estimated when the dependent variable is years of attainment in college and when the dependent variable is years of attainment in desegregated colleges.

Examining, first, years of attainment in any college we see that the standardized partial betas indicating the effect of school desegregation net of controls for sex, background, and academic qualifications is rather small in both the South ($B = .02$; $F = .04$; n.s.) and the North ($B = .09$; $F = 3.2$; $p < .10$). However, the effect in both regions is positive and it approaches statistical significance in the North. Comparing the metric coefficients reveals that the effect of school desegregation on college attainment in the North (.102) is more than two-and-one-half times as great as in the South (.040). Within both regions, however, social class background and academic qualifications are clearly the major determination of years of college attainment.

We turn our attention next to the main dependent variable in this analysis--years of attainment in a predominantly white college. Examining the second column of Table 2 we see that the net effect of elementary-secondary school desegregation on years of attainment in a predominantly white college is positive and significant in both the South ($B = .15$; $F = 11.1$; $p < .001$) and the North ($B = .11$; $F = 5.1$; $p < .05$). Moreover, in the South, early school desegregation experience appears to be of roughly equal importance to social class background and academic qualifications as determinants of years of attainment in desegregated colleges. In the North, as with years of attainment in any college, achievement test scores are shown to be the major determinant of years of attainment in a predominantly white college followed by high school grades, school desegregation, and social class background. Sex appears to be inconsequential to years of

attainment either in a predominantly white college or in any college. Comparing the metric coefficients for elementary-secondary school desegregation in the South (.171) and the North (.119) reveals that the impact of the early desegregation experience on years of attainment at a desegregated college is roughly 40 percent greater in the South than in the North.

But the comparison between the two columns of Table 2 for the different dependent variables is important for understanding the role of early desegregation on black students' college experiences in each region. This comparison shows that the effect of elementary-secondary desegregation in the South is primarily on the racial character of the college attended; while in the North the effect is primarily on college attendance per se, with only minor additional influence toward attendance at desegregated colleges. This inference is arrived at by comparing the beta coefficients for the elementary-secondary desegregation variable in the equation for "years of attainment in college" and in the equation for "years of attainment in desegregated college": .02 versus .15 in the South, .09 versus .11 in the North.

Still, the overall effect is the same in both regions, with early school desegregation experiences encouraging later desegregated experiences in college, even though the mechanisms of this influence are different. In the South, where there are many more segregated colleges due to the existence of the traditionally black institutions, black students will more often face a choice of either majority black or majority white college options than in the North. In the South, black students from desegregated elementary-secondary schools are substantially more likely to opt for the desegregated majority white college, controlling for their academic qualification and family background. On the other hand, in the North, there are many fewer majority black college options available. So if a black student goes to

college at all in the North, he or she is much more likely to enter a desegregated one in this region, given the relative availability of majority white institutions and unavailability of majority black institutions. Because attendance at a desegregated elementary-secondary school in the North increases a black student's chances of attending some college, it therefore also indirectly increases the chances of attendance at desegregated colleges. Moreover, early school desegregation in the North appears to provide a small additional direct influence toward the choice of attendance at a desegregated college.

D. Comparison of Black Students in Two-year and Four-year Colleges

It is useful to focus separately on two-year and four-year college students in each region, because we observed in Table 1 that attendance by black students in segregated and desegregated higher education institutions differed markedly by region and type of college. We had noted that (1) the use of two-year institutions was more characteristic of black students in the North than in the South; (2) for two-year black college students in both regions, about twice as many had attended predominantly white as had attended predominantly black institutions; (3) for four-year black college students, only the South had a sufficient number of predominantly black institutions to offer an alternative between segregated and desegregated college experiences for a sizable proportion of black students in the region. Thus, given that a black student chooses to enter college, the potential for earlier school desegregation to have an additional direct effect on the selection of a segregated or desegregated college depends upon the region and type of college: The potential exists for two-year college students in both regions (even though the overall use of two-year colleges is more characteristic of the North), but the potential exists

for four-year colleges in the South only.

For these analyses of the direct effect for black students of elementary-secondary desegregation on desegregation in two-year or four-year colleges, we restrict our attention to only those students who have actually attended those colleges. Thus, in examining effects for two-year college students, our subsample excludes all students who never entered college or who attended four-year institutions only (N = 329 in the North, 331 in the South). In examining effects for four-year college students, our subsample excluded all students who never entered college or who attended two-year institutions only (N = 418 in the North, 626 in the South).

Table 3 About Here

Table 3 summarizes the multiple regression analyses for each region and college type subsample. In addition to the measures of background and academic credentials used in Table 2 (sex, SES, high school tests, and high school grades), we have added two variables to these analyses to control on the proximity of each student's high school to the college attended. These added variables take into account the possibility that students from desegregated high schools will reside in local areas where desegregated colleges are more available. One of these proximity measures assigns a score of "1" to students whose high school and college are in the same zip code area ("0" otherwise), and the second proximity measure assigns a score of "1" to students whose high school residence is within commuting distance of their college ("0" otherwise).

Making comparisons in each region between different types of colleges, we determine from Table 3 that the positive direct effect for black college students of early desegregation on college desegregation is greatest for

two-year students in the North and for four-year students in the South. The only highly significant coefficient for the early desegregation effect is in the four-year South case. But there is also a noticeable direct effect in both regions for two-year students, of about the same magnitude in the North and South, that approaches statistical significance in the North.

Because we have restricted our attention to subsamples of students who have actually gained admission to two- or four-year colleges, the background and academic qualifications measures are not as strongly predictive as in the previous table. Still, for four-year college students, it is clear that the combination of SES, high school achievement tests, and high school grades are important determinants of attendance at predominantly white institutions. On the other hand, for two-year college students, these variables are of little importance in the desegregation process, but the residential convenience of the institution does have some relationship.

E. The Incremental Effect of Each Additional Year of Earlier Desegregation

Bringing together the conclusions from all three tables, we see how the direct and indirect effect of early school experiences on the perpetuation of segregation across educational levels depends upon the region and type of school. In the North, the chances are good that a black student will experience a desegregated college environment if he or she goes to college at all: In this region there are few segregated four-year institutions and twice as many opportunities for desegregation than segregation among two-year institutions. In this region, there is a significant indirect effect of early desegregation on college desegregation due to the improved chances of attending some college, which usually means a desegregated college. There is also a noticeable direct additional effect in the North to enhance the chances of desegregation among two-year college students who had attended desegregated elementary and secondary schools.

In the South, on the other hand, the opportunities for college desegregation are not as automatic if a black student is college-bound, due to the presence of a large number of majority black four-year institutions. But, in this region, the direct effect of elementary-secondary desegregation is highly significant for black students' desegregation at the four-year level.

A final table is presented to show the overall effect on black student attendance at majority white higher education institutions due to different numbers of years in desegregated elementary and secondary schools. Table 4 shows the estimated probability of enrollment at majority white colleges for the average black student with zero through four years of earlier desegregation.

Table 4 About Here

These estimates have been standardized for individual differences in background and high school academic qualifications. Except for a few minor reversals across the categories, there is a general additive incremental effect on attendance at desegregated colleges from each extra year of earlier experience in desegregated elementary or secondary schools. And a comparison of the extreme categories shows how the probability of desegregated college enrollment is increased for the average black student by moving from no earlier desegregation to desegregation throughout elementary and secondary grades: the probability increased by .094, .104, .075, and .168 in Northern two-year colleges, Northern four-year colleges, Southern two-year colleges, and Southern four-year colleges, respectively.

III. Implications for Future Research

These results are important in their own right for raising the prospect that further research on adult outcomes will increase our ability to

evaluate the true costs and benefits of current school desegregation policies. Our evidence that desegregation before high school graduation has direct and indirect effects on minority college attainments and college desegregation provides reason to believe that other adult outcomes, such as employment or housing attainments, may also be significantly influenced by racial experiences in elementary and secondary schools (McPartland, 1978). Consequently, future research should study a variety of long-term outcomes of school desegregation to open the policy debates to a broader consideration of the future consequences of continuing or withdrawing from current practice.

These results also suggest the kinds of research questions that can be derived from school desegregation issues to generate a richer theoretical framework for public policy deliberations. In particular, when we inquire about the social and institutional mechanisms that may underlie the findings presented above, but which cannot now be easily studied with the data at hand, some new directions for future research can be proposed.

F. Developing Frameworks for Policy Debates

Research is needed to introduce more sophisticated understandings of contemporary social processes into the debates on the rationale for school desegregation as a public policy. In particular, (1) we need to identify the specific processes that continue to exclude qualified minorities from promising opportunities, and to ask whether segregation plays a role in these processes; and (2) we need to compare the behavior of institutions as well as the experiences of individuals in our attempts to explain problems of minority social mobility and segregation. The first is an example of social scientists' responsibility to develop better theories; the second is an example of researchers' need to develop more appropriate scientific methodologies.

1. Studies of Specific Exclusionary Processes

The dominant framework for current thinking about the problem of race, sex, and ethnic inequalities is the social scientists' "status attainment model" that considers how individual resources of personal skills or capital are translated into positions in the employment, housing, or higher education systems. But there is growing agreement that these theories fail to explain adequately adult differences in attainments or to account for some crucial features of current inequalities.

Still, these theories continue to generate the major public policy approaches for dealing with inequalities in social mobility. Most current public programs are intended either to upgrade the skills and resources of minorities to help them compete at higher levels or to eliminate overt discrimination where officials unfairly withhold positions from qualified minorities in the relevant markets. But there is good evidence that unequal resources and overt discrimination are only part of the problem, and other factors are often at work to inhibit minorities from ever appearing in the first place as applicants for the most promising opportunities. One reason greater progress has not been made in formulating policies to deal with these factors is the lack of research to identify and directly measure specific processes that may deprive minorities of opportunities used by others to get ahead. A characterization of the indirect way that social scientists have usually dealt with problems of "discrimination" and "social inertia" helps to make this clear.

Social scientists have been primarily interested in indirectly testing for the existence of "discrimination," rather than directly specifying the processes which may unfairly exclude minorities from opportunities and estimating the relative importance of different exclusionary processes.

Up to now, discrimination has been indirectly measured as the residual gap between the occupational success of blacks and whites after individual differences in job credentials or competencies and labor market locations have been statistically taken into account. In addition to a number of methodological problems with such residual analyses, nothing is learned from this work about the specific character and mechanisms of discrimination, because discrimination is not directly conceptualized and measured. Indeed, the use of the word discrimination invites narrow thinking about only overt forms of behavior by officials who unfairly withhold jobs, housing, capital, or educational opportunities from minority applicants. Other generalities used by social scientists to account for the racial gaps, such as the "luck" of being in the right place at the right time, also fail to generate specific ideas on new ways to attack the problems.

Moreover, there are other impressive descriptive findings about the employment, housing, and educational distributions of minorities that indicate the existence of "social inertia" in mobility processes that cannot be explained well by current theories. Minorities continue to be concentrated in a restricted range of "traditional" occupations which pay off less for each additional year of education--for example, minorities are heavily overrepresented in social service occupations but not in entrepreneurial or scientific ones (McPartland and Crain, 1980). Blacks are also highly concentrated in segregated neighborhoods, but differences in economic resources do not explain these segregated housing patterns for blacks nearly as well as they do for any other ethnic minority groups (Orfield, 1980). Enrollments in two- and four-year colleges also remain highly segregated, and racial differences in entrance qualifications are unlikely to explain these patterns, especially at the two-year college level. The dominant social

science status attainment model fails to directly account for these signs of inertia in recent social change. Nor do other social science generalities --about the "residue of past discrimination" or about differences in personal preferences--help us to accurately understand the processes that inhibit minorities from taking full advantage of their improvements in personal resources or the decreases in overt discrimination.

Research is needed to identify specific exclusionary processes that go beyond lack of resources and the presence of overt discrimination, to explain continuing racial and ethnic differences in social mobility. For example, we need to understand if there are significant differences in particular social networks of opportunity that provide useful information, contacts and sponsorship for employment, housing and educational competition. We need to study how early experiences in "nontraditional" careers, neighborhoods, and schools influences perceptions and aspirations about future destinations. And we need to learn whether "human ecology" variables, such as the segregation of minorities into racially isolated schools and neighborhoods, influence the pace of minority social change through access to useful social networks or through realistic exposure to new opportunities.

2. More Appropriate Scientific Methodologies

If research is to contribute to better frameworks for social policy by developing new knowledge of the specific exclusionary processes or motivating experiences that make a difference, we need methodologies for studying institutions as well as individuals. For most of our current knowledge, social scientists have studied individual persons to compare how career outcomes depend upon differences in resources and experiences and have used well-developed methods for sampling and surveying the individuals being compared. With few exceptions, social scientists have not compared

institutions to try to explain why some settings have more success than others in attracting and placing minority individuals, and they do not have clear methodologies for choosing samples or measuring variables at the institutional level.

Methods for conducting comparative institutional research will be valuable for enriching our theories of exclusionary processes and the role of desegregation in opportunity structures. For example, to study the importance of social networks of job information, contacts, and sponsorship, it is important to not only compare the job search behavior of individuals, but also to contrast the recruitment and placement methods of firms with different minority representations. Also, to understand how earlier experiences with desegregated environments may change responsiveness to future desegregation, it is helpful to compare institutions as well as individuals. We need studies of the adult behavior of individuals from segregated and desegregated school origins, but we also need to compare institutions with different desegregation histories to learn whether different perceptions and reputations have developed concerning the treatment of racially mixed memberships.

The dominant research focus on individual comparisons has also affected the narrow rationale for school desegregation in public debates. These debates have primarily concerned whether desegregation changes individuals, either by improving minorities' academic skills or by reducing racial prejudice and stereotypes among students. Phrased in this way, the arguments about school desegregation rationale have developed unusual alliances and divisions among the interest groups primarily concerned with goals of reducing minority inequalities and discrimination (Hamilton, 1973). Aside from effects on individuals, the debates have rarely considered how segre-

gation may be linked to the structure of opportunities or to processes that channel minorities into traditional adult roles and locations. But if research is to contribute policy arguments from broader rationales, social scientists need to expand their methods to permit comparisons of institutions and organizations.

This is to suggest that if future school desegregation research is to encourage a broader framework for policy deliberations it needs to be more oriented toward theory development than simply toward testing a series of unconnected hypotheses about effects on a list of outcomes with little attention to the sociopsychological or structural mechanisms of influence. Indeed, it may make good sense to begin with other social problems questions--such as the sources of social inertia in racial segregation or the specific processes of minority exclusion that substitute for overt discrimination--and then to ask how early school desegregation may play a role, rather than begin the other way around. We do not now have well-articulated theories of why school desegregation may have short- or long-term consequences for students, and future research is likely to be limited in its scientific creativity and practical usefulness until it is directed toward developing and testing explicit causal theories.

Notes

1. We are not unaware of or insensitive to the potentially problematic policy implications of characterizing traditionally white colleges with generally less than 10 percent black (or minority) enrollment as desegregated while traditionally black colleges with similar proportions of non-black students are viewed as segregated. However, the term "desegregated college" is used here mainly for heuristic purposes and to maintain consistency with the existing desegregation literature. In this paper, college desegregation is operationalized categorically as either majority (< 50 percent) white or majority (< 50 percent) black. The net result is primarily a distinction between traditionally white and traditionally black colleges and universities since there are few majority white or majority black institutions which no longer reflect their historical origins in both student and faculty racial composition.

References

Armor, David J.

1972 "The evidence on busing." The Public Interest 28:90-126.

Braddock, Jomills Henry II

1980 "The perpetuation of segregation across levels of education: a behavioral assessment of the contact-hypothesis." Sociology of Education 53:178-176.

Cohen, David K., and Janet A. Weiss

1976 "Social science and social policy: Schools and race." Pp. 55-70 in National Institute of Education: Education, Social Science and the Judicial Process. Washington, D.C.: U.S. Government Printing Office.

Coleman, James S.

1976a "The emergence of sociology as a policy science." Pp. 253-61 in Lewis A. Coser and Otto N. Larson (eds.), The Uses of Controversy in Sociology. New York: Free Press.

1979b "Policy decisions, social science information, and education." Sociology of Education (Oct.):304-12.

Coulson, John E. et al.

1977 Emergency School Aid Act: National Evaluation. Santa Monica, Calif.: System Development Corporation.

Crain, Robert L.

1970 "School integration and occupational achievement of Negroes." American Journal of Sociology 75:593-606.

1976 "Why academic research fails to be useful." Pp. 31-45 in Florence H. Levinsohn and Benjamin D. Wright (eds.), School Desegregation: Shadow and Substance. Chicago: University of Chicago Press.

Crain, Robert L., and Rita E. Mahard

1978 "School racial composition and black college attendance and achievement test performance." Sociology of Education 51:81-110.

1979a "Research on school desegregation and achievement: how to combine scholarship and policy relevance." Educational Evaluation and Policy Analysis I(4):5-15.

1979b "Reply to Eckland." Sociology of Education 52:125-28.

Eckland, Bruce K.

1979 "School racial composition and college attendance revisited." Sociology of Education 52:122-25.

Forehand, Garlie A., Marjorie Ragosta, and Donald A. Rock

1976 Conditions and Processes of Effective School Desegregation. Princeton, N.J.: Educational Testing Service.

Hamilton, Charles V.

1973 "The nationalist vs. the integrationist." Pp. 297-310 in Nicolaus Mills (ed.), The Great School Bus Controversy. New York: Teachers College Press.

Kapel, D.

1968 Effects of Negro Density on Student Variables and the Post-High School Adjustment of Male Negroes. Project TALENT Five-Year Follow-up Studies, Interim Report No. 6. Palo Alto, Calif.: American Institutes for Research.

1969 Environmental Factors, Student Variables, Post-High School Employment Adjustment, and Post-High School Education of Male Negroes from the Project TALENT Sample. ERIC Document No. 027-888.

Levinsohn, J., J. Henderson, J. Riccobono, and R. Moore

1978 National Longitudinal Survey, Data File Users' Manual. Washington, D.C.: U.S. Government Printing Office.

Lynn, Laurence E. (ed.)

1978 Knowledge and Policy: The Uncertain Connection. Washington, D.C.: National Academy of Sciences.

McPartland, James M.

1978 "Desegregation and equity in higher education and employment: is progress related to the desegregation of elementary and secondary schools?" Law and Contemporary Problems 42(3):108-32.

McPartland, James M., and Robert L. Crain

1980 "Racial discrimination, segregation, and processes of social mobility." Pp. 95-125 in Vincent T. Covello (ed.), Poverty and Public Policy: An Evaluation of Social Science Research, Boston: G. K. Hall.

Meadows, George Richard

1976 "Open enrollment and fiscal incentives." Pp. 143-56 in Florence H. Levinsohn and Benjamin D. Wright (eds.), School Desegregation: Shadow and Substance. Chicago: University of Chicago Press.

Mills, Nicholaus (ed.)

1973 The Great School Bus Controversy, New York: Teachers College Press.

1979 Busing U.S.A. New York: Teachers College Press.

National Research Council

1978 The Federal Investment in Knowledge of Social Problems. Washington, D.C.: National Academy of Sciences.

Orfield, Gary

1978 Must We Bus? Washington, D.C.: The Brookings Institute.

1980 "School segregation and residential segregation." Ps. 227-47 in Walter G. Stephan and Joe R. Feagin (eds.), School Desegregation: Past, Present and Future. New York: Plenum.

Pettigrew, Thomas F., Elizabeth L. Useem, Clarence Normand, and Marshall S. Smith

1973 "Busing: a review of the evidence." The Public Interest 30: 88-118.

Portes, Alejandro, and Kenneth L. Wilson

1976 "Black-white differences in educational attainment." American Sociological Review 41:414-31.

St. John, Nancy H.

1972 "Social-psychological aspects of school desegregation." Pp. 133-49 in Herbert J. Walbert and Andrew T. Kopan (eds.), Rethinking Urban Education. San Francisco: Jossey-Bass.

1975 School Desegregation: Outcomes for Children. New York: Wiley.

Weinberg, Meyer

1977 Minority Students: A research Appraisal. Washington, D.C.: U.S. Government Printing Office.

Weiss, C.H.

1978 "Improving linkage between social research and public policy." Pp. 23-81 in L. E. Lynn, Jr. (ed.), Knowledge and Policy: The Uncertain Connection. Washington, D.C.: National Academy of Sciences.

Willie, Charles Vert

1978 The Sociology of Urban Education: Desegregation and Integration. Lexington, Mass.: Heath (Lexington Books).

Yudof, Mark G.

1978 "School desegregation: legal realism, reasoned elaboration, and social science research in the Supreme Court." Law and Contemporary Problems 42(4):57-110.

1980 "Nondiscrimination and beyond: the search for principle in Supreme Court desegregation decision." Pp. 97-116 in Walter G. Stephan and Joe R. Feagin (eds.), School Desegregation: Past, Present, and Future. New York: Plenum.

Table 1

Desegregation* of Black Students in Education: Percentage Distributions in Elementary-Secondary Schools and Colleges of Different Racial Compositions, by Region

		Region				
		North (N=1169)		South (N=1945)		Nation (N=3119)
Elementary-Secondary Schools-						
For grades 12, 9, 6, 3:						
Number of grade levels in desegregated schools						
	0	46.6		43.9		45.0
	1	12.6		31.2		24.2
	2	15.9	53.4	17.5	56.2	16.9
	3	9.5		4.5		6.3
	4	15.4		3.0		7.6
	Average	1.345		0.915		1.075
Colleges and Universities-						
From 1972 through 1976:						
Number of years attending desegregated Two-year or Four-year institutions						
	No College = 0	44.6		55.9		51.7
	Trad. Black College Only = 0	10.8		19.5		16.2
	1	13.2		8.6		10.3
	2	11.4	44.6	7.1	24.6	8.7
	3	6.6		3.4		4.6
	4	7.2		3.3		4.7
	5	6.2		2.2		3.7
	Average	1.157		0.572		0.790
Number of years attending desegregated Four-year institutions						
	No 4-Year College = 0	64.2		67.8		66.5
	Trad. Black 4-Year College 0	3.8		17.6		12.8
	1	8.6		4.2		5.8
	2	6.9	31.0	3.9	14.6	5.0
	3	5.0		2.4		3.4
	4	5.5		2.6		3.7
	5	5.0		1.5		2.8
	Average	0.843		0.371		0.547
Number of years attending desegregated Two-year institutions						
	No 2-Year College = 0	71.9		83.0		78.8
	Trad. Black 2-Year College = 0	9.8		5.7		6.6
	1	8.9		6.4		7.3
	2	6.6	18.3	4.6	12.3	5.3
	3	2.1		0.9		1.3
	4	0.7		0.4		0.5
	5	0.1		0.1		0.1
	Average	0.314		0.201		

*Elementary-secondary schools are defined as desegregated with at least 25 percent white enrollment; colleges and universities are defined as desegregated with at least 50 percent white enrollment.

Table 2

Summary of Multiple Regressions of College Attainment on Student Background and Academic Credentials, for Black Students, by Region

Region and Independent Variables	Dependent Variable: Years of Attainment in College			Years of Attainment in Desegregated College		
	Metric	Beta	F	Metric	Beta	F
South (N=1945)						
Sex	.106	.03	0.5	.066	.03	0.4
SES	.068	.23	28.9***	.034	.16	12.9***
H.S. Test	.046	.24	27.7***	.023	.16	12.1***
H.S. Grades	.229	.19	16.6***	.126	.14	8.8**
El-Sec Deseg	.040	.02	0.4	.171	.15	11.1***
	R^2 = .211			R^2 = .134		
North (N=1169)						
Sex	-.021	-.01	0.0	-.058	-.02	0.1
SES	.041	.13	6.1*	.032	.10	4.1*
H.S. Test	.057	.29	29.7***	.051	.28	27.5***
H.S. Grades	.192	.14	7.4**	.212	.17	10.5**
El-Sec Deseg	.102	.09	3.2	.119	.11	5.1*
	R^2 = .178			R^2 = .178		

***$p \leq .001$
** $p < .01$
* $p < .05$
F with 1 and ∞ degrees of freedom is the test statistic for the statistical significance of the addition to R^2 by adding the independent variable to a regression equation that includes all other independent variables (i.e. "unique contribution to R^2").

Table 3

Direct Effect of Elementary-Secondary Desegregation on Attainment at White Colleges for College-Bound Black Students, by Region and College Type

Region and Independent Variables	College Type: Two-Year College Students			Four-Year College Students		
	Metric	Beta	F	Metric	Beta	F
North						
Sex	-.073	-.03	0.13	.056	.02	0.06
SES	.014	.07	0.53	.007	.02	0.13
H.S. Test	-.002	-.01	0.02	.046	.25	11.02**
H.S. Grades	.064	.07	0.62	.156	.12	2.82*
Proximity 1	.046	.22	5.26**	.130	.04	0.33
Proximity 2	.262	.08	0.78	.282	.08	1.33
El-Sec Deseg.	.115	.16	2.98*	.009	.01	0.17
		N=329			N=418	
		R^2=.085			R^2=.116	
South						
Sex	-.153	-.08	0.51	.167	.05	0.84
SES	.010	.06	0.34	.032	.13	5.64**
H.S. Test	-.015	-.13	1.51	.017	.09	2.51
H.S. Grades	.013	.02	0.02	.226	.18	9.35**
Proximity 1	.397	.20	3.37*	.190	.06	1.08
Proximity 2	.139	.06	0.33	.026	.01	0.02
El-Sec Deseg.	.133	.14	1.93	.391	.26	21.70***
		N=331			N=626	
		R^2=.082			R^2=.154	

***p <.001
**p <.05
*p <.10

Table 4

Net Probability* of Enrollment at Desegregated College for Black Students With Different Elementary-Secondary School Experiences, by Region and Type of College

	Number of Grade Levels in Desegregated Elementary-Secondary Schools				
	0	1	2	3	4
North (N=1169)					
Two-Year College	.143	.198	.168	.298	.237
Four-Year College	.272	.320	.342	.339	.376
South (N=1945)					
Two-Year College	.100	.120	.168	.164	.175
Four-Year College	.111	.146	.190	.209	.279

* Estimates are calculated by substituting appropriate values of X_i into the least squares equation ($y = a + \sum_{1}^{8} b_i X_i$) obtained by regressing attendance (scored 1 or 0) in a desegregated two- or four-year college on sex, SES, high school achievement test, high school grades, and four dummy variables for the number of grade levels in desegregated elementary — secondary schools. Population averages are substituted into the equation for the first four variables, while values of 0 or 1 are substituted for the dummy variables to obtain the estimated probabilities.